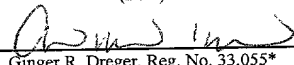


## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Stanton et al.	)	Group Art Unit Unknown
			)	
Appl. No.	:	Unknown	)	I hereby certify that this correspondence and all
			)	marked attachments are being deposited with
Filed	:	Herewith	)	the United States Postal Service as first-class
			)	mail in an envelope addressed to: Assistant
For	:	SECRETED FACTORS	)	Commissioner for Patents, Washington, D.C.
			)	20231, on
			)	<u>March 14, 2001</u>
			)	(Date)
Examiner	:	Unknown	)	
			)	Ginger R. Dreger, Reg. No. 33,055*

SEQUENCE SUBMISSION STATEMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

A copy of the Sequence Listing in computer readable form as required by 37 C.F.R. §1.821(e) is submitted herewith.

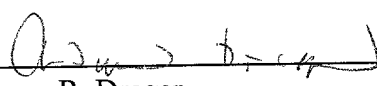
As required by 37 C.F.R. §1.82(e), the data on the enclosed disk is identical to the Sequence Listing in the application filed herewith.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: March 14, 2001

By:   
Ginger R. Dreger  
Registration No. 33,055  
Attorney of Record  
620 Newport Center Drive  
Sixteenth Floor  
Newport Beach, CA 92660  
(415) 954-4114

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 Gln Trp Leu Glu Ile Lys Ser Ser Cys Gly Arg Gly Leu Gln Pro Arg  
 115 120 125

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 Pro Pro Thr Asn Val Trp Pro Ile Trp Asn Ile Arg Cys Asn Tyr Phe  
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 Arg Gly Cys Asp Ser Thr Arg Asp Asp Lys Gly Arg Glu Pro Leu His  
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 Met Val Ala Thr Gly Ser Leu  
 1 5  
 agc agt aag aac acg gcc agc att tca gag ttg ctg gac ggt ggc tct 283  
 Ser Ser Lys Asn Thr Ala Ser Ile Ser Glu Leu Leu Asp Gly Gly Ser  
 10 15 20  
 cac cct ggg agt ctg cta agt gat ttc gac tac tgg gat tat gtc gtc 331  
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 Pro Glu Pro Asn Leu Asn Glu Val Val Phe Glu Glu Thr Thr Cys Gln  
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 Asn Leu Val Lys Met Leu Glu Asn Cys Leu Ser Lys Ser Lys Gln Thr  
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 Ser Thr Glu Pro Cys Gly Leu Arg Gly Cys Val Met His Val Asn Leu  
 100 105 110  
 Glu Ile Glu Asn Val Cys Lys Lys Leu Asp Arg Ile Val Cys Asp Ala  
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 Ser Val Val Pro Thr Phe Glu Leu Thr Leu Val Phe Lys Gln Glu Ser  
 130 135 140  
 Cys Ser Trp Thr Ser Leu Lys Asp Phe Phe Phe Ser Gly Gly Arg Phe  
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Ala Gln Glu Ala Gly Asp Val Asp Leu Glu Leu Glu Arg Tyr Ser Tyr	
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gat gat gac ggt gat gac gat gat gac gat gat gaa gaa gag gaa gag	200
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Glu Glu Thr Asn Met Ile Pro Gly Ser Arg Asp Arg Ala Pro Pro Leu	
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70 75 80 85	
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Thr Gln Arg Cys Ser Ser Ser Lys Pro Phe Cys Ile Thr Val Ile Ser	
90 95 100	
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His Gly Lys Thr Asp Thr Gly Val Leu Thr Thr Tyr Ser Met Trp Cys	
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Ser Pro Gln Ile His Asn Pro Leu Gly Gly Arg Ala Asp Ser Pro Leu	
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Val Val Lys Val Thr His Pro Gln Ser Asp Gly Ala His Leu Ser Lys	
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 Ser Leu Trp Ala Ser Gly Ala \*  
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 Arg Ala Pro Pro Leu Gln Cys Tyr Phe Cys Gln Val Leu His Ser Gly  
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 Ile Thr Val Ile Ser His Gly Lys Thr Asp Thr Gly Val Leu Thr Thr  
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 Tyr Ser Met Trp Cys Thr Asp Thr Cys Gln Pro Ile Val Lys Thr Val  
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 Asp Ser Thr Gln Met Thr Gln Thr Cys Cys Gln Ser Thr Leu Cys Asn  
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 Ala Asp Ser Pro Leu Lys Gly Gly Thr Arg His Pro Gln Gly Asp Arg  
 165 170 175  
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 180 185 190  
 Ala His Leu Ser Lys Gly Gly Lys Ala Asn Gln Pro Gln Gly Asn Gly  
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agaggctcac acta atg agc ggg cgc tct ctt ctt agc cac tgt tgc att 170  
Met Ser Gly Arg Ser Leu Leu Ser His Cys Cys Ile  
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tgg ttt tca ttg act cct ggg cct cgt ttg agt gac act gtc ctt gtc 218  
Trp Phe Ser Leu Thr Pro Gly Pro Arg Leu Ser Asp Thr Val Leu Val  
15 20 25

ttt tgt ttc aga gct ctc cca gtg tta gtg gac tca gat gag gaa att 266  
Phe Cys Phe Arg Ala Leu Pro Val Leu Val Asp Ser Asp Glu Glu Ile  
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atg acc aga tct gaa ata gct gaa aaa atg ttc tct tca gaa aag ata 314  
Met Thr Arg Ser Glu Ile Ala Glu Lys Met Phe Ser Ser Glu Lys Ile  
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atg tga tcagggcccc agtgggtcca gtgtgcatgg gagcgcggtc aggtgatggg 370  
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gaaacaattt aagaagtgtt aaagacatgt gttcagatgc ctcttaggcg gcagccacag 610  
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Met Gln Val Leu Met Ser Ile Pro Gly Ala Leu  
1 5 10  
  
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Leu Pro Asp Ser Thr Met Gly Cys Asn Ser Arg Ser Pro Cys His Leu  
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Pro Tyr Gln Lys Thr Val Ala Ser Val Ser Thr Gln Lys Ser Val Leu  
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ctt cgt aaa cag tgt tta aaa cca gac tca ttt aat cag agt gaa gga 315  
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45 50 55  
  
ttg cag tcc att ggc ttc tta gca cag aag cag ctg ata aca caa gta 363  
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60 65 70 75  
  
aac ccc agc cct tga gaggtagaag caagaggatc agaggttcaa gcgcatactc 418  
Asn Pro Ser Pro \*  
  
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aaaaaaaaaa agcaaagaaa gcaaaggact cgatgacatg atttatagac aaaagcagtg 538  
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35 40 45  
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Met Ser Thr Ala Met Asn Phe Gly Thr Lys Ser Phe Gln Pro  
1 5 10  
  
cgg ccc cca gac aaa ggc agc ttc ccg cta gac cac ttc ggt gag tgt 157  
Arg Pro Pro Asp Lys Gly Ser Phe Pro Leu Asp His Phe Gly Glu Cys  
15 20 25 30  
  
aaa agc ttt aag gaa aaa ttc atg aag tgt ctc cgc gac aag aac tat 205  
Lys Ser Phe Lys Glu Lys Phe Met Lys Cys Leu Arg Asp Lys Asn Tyr  
35 40 45  
  
gaa aat gct ctg tgc aga aat gaa tct aaa gag tat tta atg tgc agg 253  
Glu Asn Ala Leu Cys Arg Asn Glu Ser Lys Glu Tyr Leu Met Cys Arg  
50 55 60  
  
atg caa agg cag ctg atg gca cca gaa cca cta gag aaa ctc ggc ttt 301  
Met Gln Arg Gln Leu Met Ala Pro Glu Pro Leu Glu Lys Leu Gly Phe  
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aga gac ata atg gag gag aaa ccg gag gca aag gac aaa tgt tga 346  
Arg Asp Ile Met Glu Glu Lys Pro Glu Ala Lys Asp Lys Cys \*  
80 85 90  
  
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cctgatagtc tacttcgcca acgcagcgca cagcgaggcc tgtaagaacg ggttgcggtt	180
gcaggatgag tgccgaaaca ccacgcacct gttgaagcac cagctnaccg gcgcccagga	240
cagcctgctg cagacggag atg cag gca aac tcc tgc aac cag acc gtg atg	292
Met Gln Ala Asn Ser Cys Asn Gln Thr Val Met	
1 5 10	

gac ctt cgg gat tcc ctg aag aag aag gtg tct naa acc cag gag caa	340
Asp Leu Arg Asp Ser Leu Lys Lys Lys Val Ser Xaa Thr Gln Glu Gln	
15 20 25	

can gcc cgc atc aag gaa ctt gag aat aag atc gag agg ctg aac caa	388
Xaa Ala Arg Ile Lys Glu Leu Glu Asn Lys Ile Glu Arg Leu Asn Gln	
30 35 40	

gag ctg gag aaa ttt gag gac cca aaa gga aat ttc tac cac agt gca	436
Glu Leu Glu Lys Phe Glu Asp Pro Lys Gly Asn Phe Tyr His Ser Ala	
45 50 55	

ngt gaa ctc aag cgg gtt cgt ggt ggn ctt can cct act tgt gct ttg	484
Xaa Glu Leu Lys Arg Val Arg Gly Gly Leu Xaa Pro Thr Cys Ala Leu	
60 65 70 75	

tgg cgg gac tgt tct nca ctt ttt ang acc caa taa ttgggangta	530
Trp Arg Asp Cys Ser Xaa Leu Phe Xaa Thr Gln *	
80 85	

caaacctgtg taggcattgn nggtngtaat ggcttttgag ggggtcctgg cacccttaag	590
atgtgaanac cattangnng gacccaaaat gnnttttctt gntttgaact ggggcggacc	650
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Met Lys Met Asn Pro Gly Asp Lys Asp Lys Met Leu Leu Phe Ser Pro  
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ccc ttt gac ccc tgt ctt cta agg cat cta gga agg aac cag tgt cct 154  
Pro Phe Asp Pro Cys Leu Leu Arg His Leu Gly Arg Asn Gln Cys Pro  
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tgg tac tga tttacttaga ttcaacctaa ggggtccagcc actgactaag 203  
Trp Tyr \*  
35

gccaaggcca tttttccata cctgggaggg tagagattca gggttgtggg taagtgggca 263  
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tttttttttc ttttcttttt ttttgagct ggggaccgaa cccagggcct tgttgctcta 180  
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gccagtgtg agaacatgag aaacatttaa tgagtatttg tttgttaaata aatattta 358  
taa cgg cta gaa tgg cag aca cac atg gta gca cat gat ggt gat ttt 406  
\* Arg Leu Glu Trp Gln Thr His Met Val Ala His Asp Gly Asp Phe  
1 5 10 15

cgg ggg cct ttt gtt tgc tca gag ctg gta atc tct gcc ggt tgg ttt 454  
Arg Gly Pro Phe Val Cys Ser Glu Leu Val Ile Ser Ala Gly Trp Phe  
20 25 30

gct ttg cct ggt ctg gga cta acc tca cat ttt ctc act ctt gct ttc 502  
Ala Leu Pro Gly Leu Gly Leu Thr Ser His Phe Leu Thr Leu Ala Phe

GenBank accession number: U00180.1 (Rattus norvegicus genome)

35	40	45	
cga gag att agt cat cct tcc tgt cct act ggg ctc tcg ata gcg ctc	550		
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Ile Ser Ile Leu His Phe Asn Pro Ser Glu Gly Val Arg Arg Arg Gly			
65 70 75			
tcg cta ggc cag tgt gat gga tat ctg cag aat tc	633		
Ser Leu Gly Gln Cys Asp Gly Tyr Leu Gln Asn			
80 85 90			

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atctgtctcg gctgaattac tctcaccgt ttccattctg tgtgcaccag aaatctgaga	180
tccaggagta tcaacagcaa ag atg tct aat gag cca ccc cct cct tat cca	232
Met Ser Asn Glu Pro Pro Pro Pro Tyr Pro	
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gga ggg cct aca gcc cca cta ctg gag gaa aaa agt gga gcc cca cat	280
Gly Gly Pro Thr Ala Pro Leu Leu Glu Glu Lys Ser Gly Ala Pro His	
15 20 25	

acc cca ggc cga acc ttt cca gct gtg atg cag cca cca cca ggc atg	328
Thr Pro Gly Arg Thr Phe Pro Ala Val Met Gln Pro Pro Pro Gly Met	
30 35 40	

cca ctg ccc tct gtt gac att gcc ccc ccg ccc tat gag ccg cct ggc	376
Pro Leu Pro Ser Val Asp Ile Ala Pro Pro Pro Tyr Glu Pro Pro Gly	
45 50 55	

cat cca ggg cct aag cct ggt ttw atg ccc ccc acn tta cca cac att	424
His Pro Gly Pro Lys Pro Gly Xaa Met Pro Pro Thr Leu Pro His Ile	
60 65 70	

cna ana acc ttn ntn tgt aaa agt taa ataanaangg agggattcga	471
Xaa Xaa Thr Xaa Xaa Cys Lys Ser *	
75 80	

nccccctnca acnggtttca agccaattty mtaaccattt tggttttttc wtttaaaaaa	531
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 Pro Leu Met Ile Ala Glu Glu Lys Tyr Arg Gln Gln Arg Glu Glu Leu  
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gag aaa cag aga cgg gag agt tct tgc cat agc atc atc aaa aca gaa 149  
 Glu Lys Gln Arg Arg Glu Ser Ser Cys His Ser Ile Ile Lys Thr Glu  
 25 30 35

acc cag cac cgc agc tta tca gag aaa gag aaa gaa aca gag tta caa 197  
 Thr Gln His Arg Ser Leu Ser Glu Lys Glu Lys Glu Thr Glu Leu Gln  
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aaa gca gct gag gca atg tcc act ccc aga aag gat tca gac ttc act 245  
 Lys Ala Ala Glu Ala Met Ser Thr Pro Arg Lys Asp Ser Asp Phe Thr  
 55 60 65 70

agg gca cag ccc aac ctg gaa cct aaa agc aag gct gtg atc gcc agt 293  
 Arg Ala Gln Pro Asn Leu Glu Pro Lys Ser Lys Ala Val Ile Ala Ser  
 75 80 85

gaa tgc tct gaa agc cag ctc tct aca gct tcc gca ttg aca gtc gct 341  
 Glu Cys Ser Glu Ser Gln Leu Ser Thr Ala Ser Ala Leu Thr Val Ala  
 90 95 100

acc gag agg ctc cag cat gtt cta gcc gct tca gac gat aag ctt acc 389  
 Thr Glu Arg Leu Gln His Val Leu Ala Ala Ser Asp Asp Lys Leu Thr  
 105 110 115

ctg cga cgg gaa ggc aca cag aac tca agt gac acc cta caa tcg aaa 437  
 Leu Arg Arg Glu Gly Thr Gln Asn Ser Ser Asp Thr Leu Gln Ser Lys  
 120 125 130

aca gct tgt gag att aac cag agt cac aag gaa tgt agg aca gag caa 485  
 Thr Ala Cys Glu Ile Asn Gln Ser His Lys Glu Cys Arg Thr Glu Gln  
 135 140 145 150

591  
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155 160 165	
att tcc ccg agt ttc aaa gtg aaa act atc agg ctt cca gct cta gat	581
Ile Ser Pro Ser Phe Lys Val Lys Thr Ile Arg Leu Pro Ala Leu Asp	
170 175 180	
cat acg ctg act gaa aca gat ctc agt tct gaa cgc cgc gta aag caa	629
His Thr Leu Thr Glu Thr Asp Leu Ser Ser Glu Arg Arg Val Lys Gln	
185 190 195	
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Ser Glu Ile Asp Val Gln Thr Ser Thr Lys Glu Met Asn Lys Glu Ile	
200 205 210	
aag aaa acc gaa gtg agc aca cag tgt gat aat aag caa tct gtg gct	725
Lys Lys Thr Glu Val Ser Thr Gln Cys Asp Asn Lys Gln Ser Val Ala	
215 220 225 230	
gaa aaa tat ttt caa tta cct aaa aca gag aaa cgg gtg acg gta caa	773
Glu Lys Tyr Phe Gln Leu Pro Lys Thr Glu Lys Arg Val Thr Val Gln	
235 240 245	
atg ccc aaa gac tat gca gcg aaa agt cat caa agc aaa ctc caa aca	821
Met Pro Lys Asp Tyr Ala Ala Lys Ser His Gln Ser Lys Leu Gln Thr	
250 255 260	
gtt ccc aag aag cat gga gga ttg ggg gag ttt gac aga ggg aat gtc	869
Val Pro Lys Lys His Gly Gly Leu Gly Glu Phe Asp Arg Gly Asn Val	
265 270 275	
ctg ggg agg gaa gga aaa aat cag gac tcc tcc atg agc agt aca aaa	917
Leu Gly Arg Glu Gly Lys Asn Gln Asp Ser Ser Met Ser Ser Thr Lys	
280 285 290	
gaa agc agg gta ata gtt gaa aga aag caa gaa cat cta cag gac cag	965
Glu Ser Arg Val Ile Val Glu Arg Lys Gln Glu His Leu Gln Asp Gln	
295 300 305 310	
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Ser Val Pro Arg Leu Val Gln Gln Lys Ile Ile Gly Glu Ser Leu Asp	
315 320 325	
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Ser Arg Val Gln Asn Phe Gln Gln Thr Gln Thr Gln Thr Ser Arg Ile	
330 335 340	
gag cat aaa gaa ctg tcc caa cct tac agt gag aaa aaa tgt ctt aga	1109
Glu His Lys Glu Leu Ser Gln Pro Tyr Ser Glu Lys Lys Cys Leu Arg	
345 350 355	
gac aag gac aaa caa caa aaa cag gtc tcc tct aac act gac gat tca	1157
Asp Lys Asp Lys Gln Gln Lys Gln Val Ser Ser Asn Thr Asp Asp Ser	
360 365 370	
aag caa gag ata aca caa aaa caa tct tca ttt tcc tct gtg aga gaa	1205

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Lys Gln Glu Ile Thr Gln Lys Gln Ser Ser Phe Ser Ser Val Arg Glu  
 375 380 385 390  
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 Ser Gln Gln Asp Gly Glu Lys Cys Ala Ile Lys Ile Leu Glu Phe Leu  
 395 400 405  
 aga aaa cgt gaa gaa cta cag cag att ttg tct agg gta aaa cag ttt 1301  
 Arg Lys Arg Glu Glu Leu Gln Gln Ile Leu Ser Arg Val Lys Gln Phe  
 410 415 420  
 gaa gca gat tca aat aaa agt ggc ctt aaa aca ttt cag aca ctg tta 1349  
 Glu Ala Asp Ser Asn Lys Ser Gly Leu Lys Thr Phe Gln Thr Leu Leu  
 425 430 435  
 aat att gct ccg gtg tgg ctg ata agt gag gag aaa aga gaa tat gga 1397  
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 440 445 450  
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ggc aac ggt atg aca gag ctg ttg ccc atc ggt cgg cac caa caa aag 527  
 Gly Asn Gly Met Thr Glu Leu Leu Pro Ile Gly Arg His Gln Gln Lys  
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cgt ccc cac gat gcg ggg cca gag gac cat gct ttt gaa gat caa ttg 575  
 Arg Pro His Asp Ala Gly Pro Glu Asp His Ala Phe Glu Asp Gln Leu  
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 Val Ser His Leu Glu Gln Pro Val His Ser Ser His Val Glu Gly Met  
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aag gca gcg cct cct ctc cag tca ctt ctt gct tag attacatggt 765  
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Arg 1	Leu	Glu	Trp	Gln 5	Thr	His	Met	Val	Ala 10	His	Asp	Gly	Asp	Phe 15	Arg
Gly	Pro	Phe	Val	Cys	Ser	Glu	Leu	Val	Ile 25	Ser	Ala	Gly	Trp	Phe 30	Ala
Leu	Pro	Gly 35	Leu	Gly	Leu	Thr	Ser 40	His	Phe	Leu	Thr	Leu 45	Ala	Phe	Arg
Glu	Ile 50	Ser	His	Pro	Ser	Cys 55	Pro	Thr	Gly	Leu	Ser 60	Ile	Ala	Leu	Ile
Ser 65	Ile	Leu	His	Phe	Asn 70	Pro	Ser	Glu	Gly	Val 75	Arg	Arg	Arg	Gly	Ser 80
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35 40 45  
Ile Ala Pro Pro Pro Tyr Glu Pro Pro Gly His Pro Gly Pro Lys Pro  
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Met Ser Glu Lys Glu Lys Gln Asp  
1 5  
tgg ctg aag gat cct ccg ttc ctt cag aga cct ggg tgg aga gca tta 162  
Trp Leu Lys Asp Pro Pro Phe Leu Gln Arg Pro Gly Trp Arg Ala Leu  
10 15 20  
ggg aca cga aga aca gag tag cggaagaaga gttcttaagt aataagttta 213  
Gly Thr Arg Arg Thr Glu \*  
25 30  
cctcctgact ggctcacatc actgccttac tctgtagaaa gcaggtcac tcattggattt 273  
ccccctccca cccccccagc tggatcattt tttgactcag ggaaaataat taaattattg 333

tccaactggt	agtgttgatc	ggtaacagca	gaaaggcaga	aagttcctga	taatctcaat	393
attatctttt	caaaagtatt	ttcctgggaat	gttggtttgct	ttggcattac	aaagttctgt	453
actcttaaaa	atattttgac	ttgctgggca	tggaggtcac	acctttaatc	cagaggcagg	513
catggatcca	caggagttca	aggccgcctg	gctacaaaagc	gagttcaagg	gcagccaggg	573
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					Met Leu	
					1	

tgt ata tca gat ctg aaa tat ctt aaa att atc act tgc att gta aat	166
Cys Ile Ser Asp Leu Lys Tyr Leu Lys Ile Ile Thr Cys Ile Val Asn	
5 10 15	

tac tat tcc ttt cgc aga aat aat gaa tgc ttc aag aaa aaa agc	214
Tyr Tyr Ser Phe Arg Arg Asn Asn Glu Cys Phe Lys Lys Lys Ser	
20 25 30	

tgt ttg tat tgg gtt taa aacgtttcca aacaccaatt attctttact	262
Cys Leu Tyr Trp Val *	
35	

taagtcatcc gatctagtta tttaaattatt attactgcct tcacactatc aaagatggta	322
aatatctgat agaatcatat tcaaaatact tctgtttcac atttcttgag aaagtactga	382
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tag	445

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atcccaaagc	tgtatactta	gattggattc	aataaaaaag	ttaagtttac	tnaanaaaaa	180
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<400> 25

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Arg Pro Thr Leu Ser Pro Glu Arg Lys Leu Glu Trp Asn Asn Asp Ile  
35 40 45  
Pro Glu Val Asn Arg Leu Asn Ser Glu His Trp Arg Lys Thr Glu Glu  
50 55 60  
Gln Pro Gly Arg Gly Glu Val Leu Leu Pro Glu Gly Asp Val Ser Gly  
65 70 75 80  
Asn Gly Met Thr Glu Leu Leu Pro Ile Gly Arg His Gln Gln Lys Arg  
85 90 95  
Pro His Asp Ala Gly Pro Glu Asp His Ala Phe Glu Asp Gln Leu His  
100 105 110  
Pro Leu Val His Ser Asp Arg Thr Pro Val His Arg Val Phe Asp Val  
115 120 125  
Ser His Leu Glu Gln Pro Val His Ser Ser His Val Glu Gly Met Leu  
130 135 140  
Ala Lys Met Glu Gly Met Ala Gln Arg Ser Gly His Gln Val Ser Lys  
145 150 155 160  
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gagggcaagg aaggagaggg gaagcgaaag catatcctaa aacatttact taaaggagga 180  
aagaaaaggg gtcgcagaa atg gct ggg gca att ata gaa aac atg agc acc 232  
Met Ala Gly Ala Ile Ile Glu Asn Met Ser Thr  
1 5 10  
aag aag ctc tgc att gtt gga ggg att ctt ctg gtt ttc caa atc gtt 280  
Lys Lys Leu Cys Ile Val Gly Gly Ile Leu Leu Val Phe Gln Ile Val  
15 20 25  
gcc ttt ctg gtg gga ggc ttg atc gct cca gca ccc aca acg gca gtg 328  
Ala Phe Leu Val Gly Gly Leu Ile Ala Pro Ala Pro Thr Thr Ala Val  
30 35 40  
tcc tac gtg gca gca aaa tgt gtg gat gtc cgg aag aac cac cat aaa 376  
Ser Tyr Val Ala Ala Lys Cys Val Asp Val Arg Lys Asn His His Lys  
45 50 55  
aca aga tgg ctg atg ccc tgg gga cca aac aag tgt aac aag atc aat 424

Thr 60	Arg	Trp	Leu	Met	Pro 65	Trp	Gly	Pro	Asn	Lys 70	Cys	Asn	Lys	Ile	Asn 75	
gac Asp	ttc Phe	gaa Glu	gaa Glu	gca Ala 80	att Ile	cca Pro	agg Arg	gaa Glu	att Ile 85	gaa Glu	gcg Ala	aat Asn	gac Asp	att Ile 90	gtg Val	472
ttt Phe	tct Ser	gta Val	cac His 95	att Ile	ccc Pro	ctc Leu	cct Pro	tct Ser 100	atg Met	gag Glu	atg Met	agc Ser	cca Pro 105	tgg Trp	ttc Phe	520
cag Gln	ttt Phe	atg Met 110	ctg Leu	ttt Phe	atc Ile	ctg Leu	cag Gln 115	ata Ile	gac Asp	att Ile	gct Ala	ttc Phe 120	aag Lys	cta Leu	aac Asn	568
aac Asn	caa Gln 125	atc Ile	aga Arg	gaa Glu	aat Asn	gca Ala 130	gaa Glu	gtt Val	tcc Ser	atg Met	gat Asp 135	gtt Val	tcc Ser	ctg Leu	ggt Gly	616
tac Tyr 140	cgt Arg	gat Asp	gat Asp	atg Met	ttt Phe 145	tct Ser	gag Glu	tgg Trp	act Thr	gaa Glu 150	atg Met	gcg Ala	cac His	gaa Glu	aga Arg 155	664
gta Val	cca Pro	cgt Arg	aaa Lys 160	ctc Leu	aga Arg	tgc Cys	act Thr	ttc Phe	aca Thr 165	tcc Ser	ccc Pro	aag Lys	acc Thr	cca Pro 170	gag Glu	712
cat His	gaa Glu	ggg Gly	cgt Arg 175	cat His	tat Tyr	gaa Glu	tgt Cys	gat Asp 180	gtc Val	ctt Leu	cct Pro	ttc Phe 185	atg Met	gaa Glu	att Ile	760
ggg Gly	tca Ser	gtg Val 190	gct Ala	cat His	aag Lys	tat Tyr	tac Tyr 195	ctt Leu	cta Leu	aat Asn	atc Ile	cgg Arg 200	cta Leu	cct Pro	gta Val	808
aat Asn	gag Glu 205	aag Lys	aag Lys	aaa Lys	atc Ile	aat Asn 210	gtt Val	gga Gly	att Ile	ggg Gly 215	gaa Glu	ata Ile	aag Lys	gac Asp	att Ile	856
cgg Arg 220	ttg Leu	gtg Val	gga Gly	atc Ile	cac His 225	caa Gln	aat Asn	gga Gly	ggg Gly	ttc Phe 230	act Thr	aag Lys	gta Val	tgg Trp	ttt Phe 235	904
gct Ala	atg Met	aag Lys	acc Thr 240	ttc Phe	ctc Leu	aca Thr	ccc Pro	agc Ser	atc Ile 245	ttc Phe	atc Ile	att Ile	atg Met	gtg Val 250	tgg Trp	952
tat Tyr	tgg Trp	aga Arg	agg Arg 255	atc Ile	acc Thr	atg Met	atg Met	tcc Ser 260	cga Arg	cct Pro	cca Pro	gtg Val	ctt Leu 265	ctg Leu	gaa Glu	1000
aaa Lys	gtc Val	atc Ile 270	ttt Phe	gcc Ala	ctt Leu	ggg Gly	att Ile 275	tcc Ser	atg Met	acc Thr	ttt Phe 280	atc Ile	aat Asn	atc Ile	cct Pro	1048
gtg Val	gaa Glu	tgg Trp	ttt Phe	tcc Ser	att Ile	gga Gly	ttt Phe	gat Asp	tgg Trp	acc Thr	tgg Trp	atg Met	ctg Leu	tta Leu	ttt Phe	1096

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Gly Asp Ile Arg Gln Gly Ile Phe Tyr Ala Met Leu Leu Ser Phe Trp			
300	305	310	315
atc atc ttc tgt ggc gag cac atg atg gat caa cat gag cgg aat cac			1192
Ile Ile Phe Cys Gly Glu His Met Met Asp Gln His Glu Arg Asn His			
	320	325	330
att gca ggg tat tgg aag caa gtt gga cca att gct gtt ggc tct ttc			1240
Ile Ala Gly Tyr Trp Lys Gln Val Gly Pro Ile Ala Val Gly Ser Phe			
	335	340	345
tgc ctc ttc ata ttt gac atg tgt gag aga gga gtg caa ctc aca aat			1288
Cys Leu Phe Ile Phe Asp Met Cys Glu Arg Gly Val Gln Leu Thr Asn			
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cct ttc tac agt atc tgg act aca gat gtt gga aca gaa ctg gct atg			1336
Pro Phe Tyr Ser Ile Trp Thr Thr Asp Val Gly Thr Glu Leu Ala Met			
	365	370	375
gct ttc atc att gtg gca ggt atc tgc ctc tgc ctc tac ttc ctg ttt			1384
Ala Phe Ile Ile Val Ala Gly Ile Cys Leu Cys Leu Tyr Phe Leu Phe			
	380	385	390
ctg tgt ttc atg gta ttt caa gta ttc aga aac atc agt ggg aaa cag			1432
Leu Cys Phe Met Val Phe Gln Val Phe Arg Asn Ile Ser Gly Lys Gln			
	400	405	410
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Ser Ser Leu Pro Ala Met Ser Lys Val Arg Arg Leu His Tyr Glu Gly			
	415	420	425
ctg att ttc agg ttc aag ttc ctc atg ctg atc acc ttg gct tgt gct			1528
Leu Ile Phe Arg Phe Lys Phe Leu Met Leu Ile Thr Leu Ala Cys Ala			
	430	435	440
gcc atg act gtt atc ttc ttc att gtt agt cag gtg aca gaa ggc cat			1576
Ala Met Thr Val Ile Phe Phe Ile Val Ser Gln Val Thr Glu Gly His			
	445	450	455
tgg aaa tgg ggt ggg gtc aca gtt caa gtg agc agt gct ttc ttc act			1624
Trp Lys Trp Gly Gly Val Thr Val Gln Val Ser Ser Ala Phe Phe Thr			
	460	465	470
gga atc tat ggg atg tgg aac ctg tat gtc ttt gct ttg atg ttc ttg			1672
Gly Ile Tyr Gly Met Trp Asn Leu Tyr Val Phe Ala Leu Met Phe Leu			
	480	485	490
tat gca cca tcc cat aag aac tat ggg gaa gac cag tct aat ggt gac			1720
Tyr Ala Pro Ser His Lys Asn Tyr Gly Glu Asp Gln Ser Asn Gly Asp			
	495	500	505
ctg ggt gtc cac agc ggg gaa gaa ctg cag ctc act acc aca atc acc			1768
Leu Gly Val His Ser Gly Glu Glu Leu Gln Leu Thr Thr Thr Ile Thr			
	510	515	520

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His Val Asp Gly Pro Thr Glu Ile Tyr Lys Leu Thr Arg Lys Glu Ala  
525 530 535

cag gag tag taggctatgg cattcatcct cagggcaggt gatgaagcca 1865  
Gln Glu \*  
540

agttgctggt gcatgctgac cctcatgaat atgctttcgt atctttatgt cccaggatca 1925  
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10 15 20  
Ala Arg Met Phe Trp Trp Leu Tyr Tyr Ala Thr Asn Pro Cys Lys Asn  
25 30 35  
Phe Ser Glu Leu Pro Leu Val Met Trp Leu Gln Gly Gly Pro Gly Gly  
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Ser Ser Thr Gly Phe Gly Asn Phe Glu Glu Ile Gly Pro Leu Asp Thr  
55 60 65 70  
Arg Leu Lys Pro Arg Asn Thr Thr Trp Leu Gln Trp Ala Ser Leu Leu  
75 80 85  
Phe Val Asp Asn Pro Val Gly Thr Gly Phe Ser Tyr Val Asn Thr Thr  
90 95 100  
Asp Ala Tyr Ala Lys Asp Leu Asp Thr Val Ala Ser Asp Met Met Val  
105 110 115  
Leu Leu Lys Ser Phe Phe Asp Cys His Lys Glu Phe Gln Thr Val Pro  
120 125 130  
Phe Tyr Ile Phe Ser Glu Ser Tyr Gly Gly Lys Met Ala Ala Gly Ile  
135 140 145 150  
Ser Leu Glu Leu His Lys Ala Ile Gln Gln Gly Thr Ile Lys Cys Asn  
155 160 165  
Phe Ser Gly Val Ala Leu Gly Asp Ser Trp Ile Ser Pro Val Asp Ser  
170 175 180  
Val Leu Ser Trp Gly Pro Tyr Leu Tyr Ser Val Ser Leu Leu Asp Asn  
185 190 195  
Lys Gly Leu Ala Glu Val Ser Asp Ile Ala Glu Gln Val Leu Asn Glu  
200 205 210  
Lys Gln Gly Leu Leu Gln Gly Ser His Ser Ala Val Gly Glu Ser Arg  
215 220 225 230  
Asn Asp His

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aat gac atg ggc ctt caa cct ctg cct gta ggg aag gac gca cac agt 208  
Asn Asp Met Gly Leu Gln Pro Leu Pro Val Gly Lys Asp Ala His Ser  
25 30 35 40

gca cca gga gtg aca gtc tct ggg aaa aac cac aaa aga act cag gca 256  
Ala Pro Gly Val Thr Val Ser Gly Lys Asn His Lys Arg Thr Gln Ala  
45 50 55

cct gac aag aaa cag aga att gat gtt tgt cta gaa agc cag gac ttt 304  
Pro Asp Lys Lys Gln Arg Ile Asp Val Cys Leu Glu Ser Gln Asp Phe  
60 65 70

cta atg aag aca aat act tcc aag gag tta aaa atg gca atg gag agg 352  
Leu Met Lys Thr Asn Thr Ser Lys Glu Leu Lys Met Ala Met Glu Arg  
75 80 85

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tcc ttt aat cca gtc aac ctt tcc ctg act gtg gtg taa aagaaaatga      401
Ser Phe Asn Pro Val Asn Leu Ser Leu Thr Val Val *
          90                      95                      100
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ggagcgccctt	ctctccatct	tccctcctt	ctctccttc	caattgcgtc	atctgaaatt	461
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ctcatcacc	acagagaagt	caagggtga	acttgagagc	ctcccaacc	tgcctcttc	581
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<212> DNA
<213> Rattus norvegicus
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<223> n = A,T,C or G
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<221> CDS
<222> (297) ... (494)
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gttgatctgt aattattcct agtagtctct tagagttctt agaagcatgc tgttaccgct	180
aatatttcct tttggtttgg atcttactta aacatattgt ttccttactc tctttttcat	240
cccagcttgt ctaactgaaa ggccagaccc aacttgatct atccctttaa aacttc atg	299

Met  
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tct tgg cct gtt gat ttc tct gct cca ggt gtc acc gaa ggg gtt cgc	347
Ser Trp Pro Val Asp Phe Ser Ala Pro Gly Val Thr Glu Gly Val Arg	
5 10 15	

cta gcg aac ccc ttc gta aca gcc aag gtt ttt gag aca gag gtt tca	395
Leu Ala Asn Pro Phe Val Thr Ala Lys Val Phe Glu Thr Glu Val Ser	
20 25 30	

aca gca ttc ctg gag gag aca caa agg aca gat gag tca cat gaa gga	443
Thr Ala Phe Leu Glu Glu Thr Gln Arg Thr Asp Glu Ser His Glu Gly	
35 40 45	

tgg gag gag gga agg tgg ctg ttg ata ggt att ttg aga cac tct att	491
Trp Glu Glu Gly Arg Trp Leu Leu Ile Gly Ile Leu Arg His Ser Ile	
50 55 60 65	

tga gtcctacaca acactcccc ctcccccaa accattttta tgtctattga	544
*	

cctttcctct agtcatacag ggaaattcac agttacctac aaagaaccac taattgtaac	604
aagtcaagag gaaacttatt tttgataatg actcattgaa gatgttttga aaatttaaaa	664
ataagctctg ttagcagaag tctgtningaa aagcangaag gaantgtttg tttattanat	724
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<220>  
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Met Val Ala His Asn Phe Asn	
1 5	

ccc cat gct ggg gaa gca gag gca cac tta atc tgt gtg agt ccc agg	160
Pro His Ala Gly Glu Ala Glu Ala His Leu Ile Cys Val Ser Pro Arg	
10 15 20	

cca tcc agg gat acc gta gta gtg aga ccc tgt ctc aca aaa caa aga	208
Pro Ser Arg Asp Thr Val Val Val Arg Pro Cys Leu Thr Lys Gln Arg	
25 30 35	

atg gga att tag ggctgggtgg gctcagcatg caactgtgcc tgttacctag	260
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GenBank accession number: U00180.1 (Rattus norvegicus genome)

Met Gly Ile \*

40

tctggcctga	gttcaattcc	caagactcaa	tgtatgagga	gagaaacgat	ttctgaactc	320
attcattgat	ctccaaatgt	gtggtatagg	tgcccttccc	ttaaataaaa	caaacaaaca	380
aaaaacaaca	aaaacaacaa	accccccaata	aatgtatatt	taatttttaa	agactgtact	440
tgggcatggt	acttcacatc	tacagttacg	acattctaga	ggctcaggcc	tgggaattgc	500
tatgaatttg	aggccagtct	gggttagagt	gactttctcat	ctaggcagga	ctacgtaata	560
agtctttgcc	caaaaataaa	cagcaaccca	aataagagca	acaagaattc	tccctccaaa	620
tagtaacctg	ggcctggaga	gacagcttag	caactgagtg	cttgccgagc	catcgaggac	680
tggagtcctg	attccagcac	ccgtgtgaca	gacaagctgg	gcgttcactc	atgctgatga	740
acccaaggc	tgaggagaca	ctgactcttc	tctggccctg	ttcatgctgt	ccacaggtgc	800
ccaagtagca	gttaagtaga	ctgtcagaca	acatggctgg	ctttttaagc	aagaacagta	860
actgaagaaa	tacacttttg	aagtactgtt	aattttgctt	aaaacttggt	agggagctgg	920
aggatggctc	agtggttaag	agcactgact	gctcttccag	aggtcctgag	ttcaattccc	980
agcaaccaca	tggtggctca	caaccatctg	taatgagctc	tgatgccctc	tttttggtgt	1040
gtctgaagac	agcgacagtg	tactcatata	aaataaaaata	aatctttttt	ttttttaaaa	1100
gaaatttgct	agagatatgg	caggaagggt	atattttttac	ctattttacct	gggtgggctaa	1160
tctgtgtatt	tttttcaaaa	ttaagatact	atataggagc	cgcgaagggg	tcgctaggcc	1220
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<210> 34

<211> 541

<212> PRT

<213> Rattus norvegicus

<400> 34

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Val	Gly	Gly	Ile	Leu	Leu	Val	Phe	Gln	Ile	Val	Ala	Phe	Leu	Val	Gly
			20					25					30		
Gly	Leu	Ile	Ala	Pro	Ala	Pro	Thr	Thr	Ala	Val	Ser	Tyr	Val	Ala	Ala
			35				40					45			
Lys	Cys	Val	Asp	Val	Arg	Lys	Asn	His	His	Lys	Thr	Arg	Trp	Leu	Met
	50					55					60				
Pro	Trp	Gly	Pro	Asn	Lys	Cys	Asn	Lys	Ile	Asn	Asp	Phe	Glu	Glu	Ala
65				70					75					80	
Ile	Pro	Arg	Glu	Ile	Glu	Ala	Asn	Asp	Ile	Val	Phe	Ser	Val	His	Ile
			85					90						95	
Pro	Leu	Pro	Ser	Met	Glu	Met	Ser	Pro	Trp	Phe	Gln	Phe	Met	Leu	Phe
			100					105					110		
Ile	Leu	Gln	Ile	Asp	Ile	Ala	Phe	Lys	Leu	Asn	Asn	Gln	Ile	Arg	Glu
		115				120						125			
Asn	Ala	Glu	Val	Ser	Met	Asp	Val	Ser	Leu	Gly	Tyr	Arg	Asp	Asp	Met
	130					135					140				
Phe	Ser	Glu	Trp	Thr	Glu	Met	Ala	His	Glu	Arg	Val	Pro	Arg	Lys	Leu
145				150					155					160	
Arg	Cys	Thr	Phe	Thr	Ser	Pro	Lys	Thr	Pro	Glu	His	Glu	Gly	Arg	His
			165					170						175	
Tyr	Glu	Cys	Asp	Val	Leu	Pro	Phe	Met	Glu	Ile	Gly	Ser	Val	Ala	His
			180					185					190		
Lys	Tyr	Tyr	Leu	Leu	Asn	Ile	Arg	Leu	Pro	Val	Asn	Glu	Lys	Lys	Lys
		195				200					205				
Ile	Asn	Val	Gly	Ile	Gly	Glu	Ile	Lys	Asp	Ile	Arg	Leu	Val	Gly	Ile
	210				215					220					
His	Gln	Asn	Gly	Gly	Phe	Thr	Lys	Val	Trp	Phe	Ala	Met	Lys	Thr	Phe
225					230					235				240	

Leu	Thr	Pro	Ser	Ile	Phe	Ile	Ile	Met	Val	Trp	Tyr	Trp	Arg	Arg	Ile			
				245					250					255				
Thr	Met	Met	Ser	Arg	Pro	Pro	Val	Leu	Leu	Glu	Lys	Val	Ile	Phe	Ala			
			260					265					270					
Leu	Gly	Ile	Ser	Met	Thr	Phe	Ile	Asn	Ile	Pro	Val	Glu	Trp	Phe	Ser			
	275						280					285						
Ile	Gly	Phe	Asp	Trp	Thr	Trp	Met	Leu	Leu	Phe	Gly	Asp	Ile	Arg	Gln			
	290					295					300							
Gly	Ile	Phe	Tyr	Ala	Met	Leu	Leu	Ser	Phe	Trp	Ile	Ile	Phe	Cys	Gly			
305				310					315						320			
Glu	His	Met	Met	Asp	Gln	His	Glu	Arg	Asn	His	Ile	Ala	Gly	Tyr	Trp			
			325						330					335				
Lys	Gln	Val	Gly	Pro	Ile	Ala	Val	Gly	Ser	Phe	Cys	Leu	Phe	Ile	Phe			
			340					345					350					
Asp	Met	Cys	Glu	Arg	Gly	Val	Gln	Leu	Thr	Asn	Pro	Phe	Tyr	Ser	Ile			
		355					360					365						
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	370					375					380							
Ala	Gly	Ile	Cys	Leu	Cys	Leu	Tyr	Phe	Leu	Phe	Leu	Cys	Phe	Met	Val			
385				390					395						400			
Phe	Gln	Val	Phe	Arg	Asn	Ile	Ser	Gly	Lys	Gln	Ser	Ser	Leu	Pro	Ala			
			405					410						415				
Met	Ser	Lys	Val	Arg	Arg	Leu	His	Tyr	Glu	Gly	Leu	Ile	Phe	Arg	Phe			
		420					425						430					
Lys	Phe	Leu	Met	Leu	Ile	Thr	Leu	Ala	Cys	Ala	Ala	Met	Thr	Val	Ile			
	435						440					445						
Phe	Phe	Ile	Val	Ser	Gln	Val	Thr	Glu	Gly	His	Trp	Lys	Trp	Gly	Gly			
	450					455					460							
Val	Thr	Val	Gln	Val	Ser	Ser	Ala	Phe	Phe	Thr	Gly	Ile	Tyr	Gly	Met			
465				470						475					480			
Trp	Asn	Leu	Tyr	Val	Phe	Ala	Leu	Met	Phe	Leu	Tyr	Ala	Pro	Ser	His			
			485						490					495				
Lys	Asn	Tyr	Gly	Glu	Asp	Gln	Ser	Asn	Gly	Asp	Leu	Gly	Val	His	Ser			
		500					505						510					
Gly	Glu	Glu	Leu	Gln	Leu	Thr	Thr	Thr	Ile	Thr	His	Val	Asp	Gly	Pro			
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Thr	Glu	Ile	Tyr	Lys	Leu	Thr	Arg	Lys	Glu	Ala	Gln	Glu						
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 <212> DNA  
 <213> Rattus norvegicus

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 <222> (247)...(387)

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atgtacaact gctacgctga tctaaacatt caaagtgcac acatttcgct atgaagccac	180
gtgaccagag tcttggggac taatttctgt cttagtcaga ttcttattgc tatatgaaga	240
aatacc atg ata gtg tca act ttt ata aag aaa aag tat tcc ttt ggg	288
Met Ile Val Ser Thr Phe Ile Lys Lys Lys Tyr Ser Phe Gly	
1 5 10	



ttgtgggcct	ttcctttccc	ctaacgtttc	ctccttcccc	gcaatctgac	cataaatgag	960
gagatTTTTT	TTTTctctta	ctacactttt	tgcaatccta	gtttgcaatc	ctcagtgtgg	1020
ctggctttca	gttcaaattg	tggagaacca	tgtatctgtg	tggtgagagc	attcattttc	1080
aagactaatt	cttaaaccgc	ttatccccgg	agacagaaac	cgtggcagag	ttgctatcct	1140
ctgagctggg	gtggatcatga	tgatcagtta	ggttactaac	atcttcctaa	atgaatcggg	1200
gttttgtgtt	gctctgtttt	catttggtatg	acagggtgtt	gttctgttta	atgcgtgtgg	1260
gtttttccaa	catgtccgta	aaaatatctt	ttaagcacca	gangtagtga	agaaagctgt	1320
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<210> 38

<211> 1554

<212> DNA

<213> Rattus norvegicus

<220>

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<223> n = A,T,C or G

<221> CDS

<222> (141)...(1082)

<400> 38

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ccoctgggta	tctccagaac	atg gca agc	cgt gga tac	ctg cat cac	ctg ctg	173

Met	Ala	Ser	Arg	Gly	Tyr	Leu	His	His	Leu	Leu
1				5					10	

act gca gag gga gcc tgg gag gag ttt gta tca aag gcc aag ttg ccc	221
Thr Ala Glu Gly Ala Trp Glu Glu Phe Val Ser Lys Ala Lys Leu Pro	
15 20 25	

agg gat agg gca gtg gcc ctc cac aaa gca ctg agg gat ctg aca gca	269
Arg Asp Arg Ala Val Ala Leu His Lys Ala Leu Arg Asp Leu Thr Ala	
30 35 40	

ctc ttg gcc ata gca gaa aga ggc aga tct cgg aaa ggc tgg aaa ggc	317
Leu Leu Ala Ile Ala Glu Arg Gly Arg Ser Arg Lys Gly Trp Lys Gly	
45 50 55	

aag gag aag ttt gtg aaa gca ttt cct tgc ttg aaa gca gac ttg gag	365
Lys Glu Lys Phe Val Lys Ala Phe Pro Cys Leu Lys Ala Asp Leu Glu	
60 65 70 75	

gag cac atc agc cag ctc tat gcc cta gcc gac cat gct gag gaa ctg	413
Glu His Ile Ser Gln Leu Tyr Ala Leu Ala Asp His Ala Glu Glu Leu	
80 85 90	

cac agg ggc tgc acc gtc tcc aac atg gtg gct gac tcc ttc agt gtt	461
His Arg Gly Cys Thr Val Ser Asn Met Val Ala Asp Ser Phe Ser Val	
95 100 105	

gcc tcc gac atc ctg aac atc ttt ggt ctc ttt ctg gca cct gag tca	509
Ala Ser Asp Ile Leu Asn Ile Phe Gly Leu Phe Leu Ala Pro Glu Ser	
110 115 120	

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<210> 40  
<211> 1142  
<212> DNA  
<213> Rattus norvegicus

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cctccaacgt gttgcaattg caggagtaac ctaccacatc ctgcagctac agtgatctag 480  
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caacccaact aaagtttaat aaaaaaagaa aaacaaaaca agattttaaat cattctttcc 600  
ctcattcttt tttnnagatnc agggctcncc tagttttnaa caaacacagn ngcagngnng 660  
ggnnccccng gnggggnttt tttncnttgn gccnctnngc ancccccccn cccaggcngg 720  
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ccctanccac atgttttgnc ccaagantgt aaanccactt naannctgng ggatatctcn 1080  
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cc 1142

<210> 41  
<211> 502  
<212> DNA  
<213> Rattus norvegicus

<220>  
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<223> n = A,T,C or G

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ggtatggaaa gaatgcgaac atttaaactg cgccaatgcg gcggccatct tggtgagaaa 180  
gttctagacc gagctttgat gtgatttttt tgatggtaca atgcagcgag catggccacg 240  
ggagctttga atccagccga cagctccgag atttgccctt ccagtgcctt tgctaccgt 300  
agagaggact gctgagatgg gattccttgt gacaagccta cttaccttta actgccagca 360  
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aaaaaaaaaa aaaagcggcc gc 502

<210> 42  
<211> 1426  
<212> DNA  
<213> Rattus norvegicus

<220>  
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 <222> (1)...(1426)  
 <223> n = A,T,C or G

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 gacaagggat atttgtgctg tgggtattgc atcttatgga gggctgtagc taactgggac 180  
 tcctgggtga cccaacagg cctttgatcc tctgtctctc cccgcttgat ctttcttacc 240  
 ttatgcttcc ccaagtgcag ctgagggact acacagtggc tcccggccca ctccaaacac 300  
 aggaaatcaa tctcagggag aggagataag aagtgaggag aagccaagat tcaaccaata 360  
 gatggtaatt gctcctggga cgcggccccc aagcatcatt tccataggaa ggactgagtt 420  
 tgggtcctga agcccagtgg agtacctttc tctgctgaa ttctgttggt atccctggcc 480  
 aagtctctt tccagaaacc ccacctttaa aaccagctga gaaggacctt cttctctatg 540  
 tttaataggt aactttccat agcttagctt ccctgcagtc tcccagagtc ccagttaaaa 600  
 ttctgccata ggtcaaaagt ggggttgaga ggtgaagtca gaggccatgc atggagctca 660  
 gaacgtttct aaacctcctg tgattcattg agtagccct agactctaga aggtcagat 720  
 gccaaaaagg ktgactttat aatttcttag ggtcttctca tgggatcgkt ttcagagtgg 780  
 gcattcacta aatgatagca agtttattaa ttgtttccca gygcctgatc tctttatttn 840  
 cccagggtt ccaaccagag cccttggttg aaagtctccc acccaccccc caccctgaga 900  
 cttggtggtt ttctgagatt ccccagggtt ggcaaaattg gcattcttac agggagccct 960  
 gacttctagc acgttaccta gattttttac cctgctctct ctgcctattt tactatggga 1020  
 tcaactgntct ctttggaact aaggaaccac cttgaagtag agtgagggtga ccacgtgttg 1080  
 gtggcggaaga atataagcat tggctcttaa aagagaactt ctatgaagtc aggtgcaag 1140  
 ctttaacatg gcacaagtgt caccttactg gctgctaagt ctggatgtca accaaagggtc 1200  
 aactctntaa ttaaagaaaa gcaagggaga aganagggtg aagnggcttn cataaacttt 1260  
 attcaaaatg tctaccagga atggtggtga caccaataat cccacatgtt ggatgtngag 1320  
 gcaggaagaa tgatggtaag gggcatcctc actacataat gaggtaggc tngactaggt 1380  
 taactntgct tnaaaaaaaaa aaaaaaaaaa aaaaaaaagg ggngcc 1426

<210> 43  
 <211> 985  
 <212> DNA  
 <213> Rattus norvegicus

<220>  
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 <222> (79)...(255)

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 ctctcttctg ccgccagt atg aca tca tca agg aca acg agc cca ata aca 111  
 Met Thr Ser Ser Arg Thr Thr Ser Pro Ile Thr  
 1 5 10  
 aca agg aaa aaa cca aga gtg cat cag aga cca gca ccc cag agc acc 159  
 Thr Arg Lys Lys Pro Arg Val His Gln Arg Pro Ala Pro Gln Ser Thr  
 15 20 25  
 agg gtg ggg gtc tcc tcc gaa gca aga tat gaa acc ott tca gtg ctt 207  
 Arg Val Gly Val Ser Ser Glu Ala Arg Tyr Glu Thr Leu Ser Val Leu  
 30 35 40  
 gct ctg agc agc tca gaa gta gaa tgc gag agg acc tca ctg ttc tga 255  
 Ala Leu Ser Ser Ser Glu Val Glu Cys Glu Arg Thr Ser Leu Phe \*

55

cgatgattgt	ccaacacaca	tccggccctc	tccgtgtctc	ctcccaccac	catcttctcc	315
tatcaccggg	cttactatct	tctctcctgg	ctttcctctt	tctgatggcg	gttcctgaag	375
cctccaacta	accctaact	cggggagcgc	ctcgacagtg	tttgtggcta	aggctacact	435
cagagacaga	gttgacgaat	gagggagacc	cagcccagag	gacgccattg	ctgggaggtta	495
gactgggtgc	gagggccctt	ggcacaggac	tcacatctgg	gctgttcagc	ttgacccgaa	555
ggctgtgtgt	gaaaggggga	aaaagacaag	attgccaggc	agggctgttg	tttttgtggc	615
ttcgagggac	aagaacctgg	ctaaaaggca	gcagccctgc	tgttcttttt	ctcctctgtc	675
ctgtttccta	ccttacaaga	agtccatgca	accaaccggg	gctctggcac	ttttcttggt	735
tatttcctc	ctggcttcca	aacaagccct	ctgtggacat	catcaaagca	tggataaccc	795
ccctctgcag	ggtgggcttc	attctccgct	ggtccctgta	gccttctctg	acacagggtg	855
aaagtgttaa	aagtggtagg	agtgcagcta	gccacagggt	ctccttttcc	catctcagtc	915
tgaccaagga	ggctgaacta	cgaacccaaa	ttcagcgaaa	aaaaaaaaaa	aaaaaaaaaa	975
aagcgggcgc						985

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<210> 44
<211> 2010
<212> DNA
<213> Rattus norvegicus
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<220>
<221> CDS
<222> (239)...(1507)
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<221> sig_peptide
<222> (239)...(343)
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<400> 44
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agcagaccaa cagaataggc aactatggct ggagaaccgg gtatcagagt aatgcttgac      120
ctcgggaaac accaaatttc ttcttcgat cgcagaagta gtactcggcg aaattcacta      180
ggtaggaggc tctcatctg ggaagaaccg gtgcctgggg ggacctggct ggataggt      238
atg ggg gat cga ggc cgg tcc cct agt ctc cgg tcc ccc cat ggc agt      286
Met Gly Asp Arg Gly Arg Ser Pro Ser Leu Arg Ser Pro His Gly Ser
-35             -30             -25             -20

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cct cca act cta agc acc ctc act ctc ctg ctg ctc ctc tgt gga cag 334  
Pro Pro Thr Leu Ser Thr Leu Thr Leu Leu Leu Leu Leu Cys Gly Gln  
-15 -10 -5

gct cac tcc cag tgc aag atc ctc cgc tgc aat gcc gag tac gtc tcg 382  
Ala His Ser Gln Cys Lys Ile Leu Arg Cys Asn Ala Glu Tyr Val Ser  
1 5 10

tcc act ctg agc ctt cgg gga ggg ggc tca ccg gac acg cca cat gga 430  
 Ser Thr Leu Ser Leu Arg Gly Gly Gly Ser Pro Asp Thr Pro His Gly  
 15 20 25

ggc ggc cgt ggt ggg ccg gcc tca ggt ggc ttg tgt cgc gcc ctg cgc 478  
Gly Gly Arg Gly Gly Pro Ala Ser Gly Gly Leu Cys Arg Ala Leu Arg  
30 35 40 45

tcc tac gct ctc tgc acg cgg cgc acc gcc cgc acc tgc cgc ggg gac 526  
 Ser Tyr Ala Leu Cys Thr Arg Arg Thr Ala Arg Thr Cys Arg Gly Asp  
 50 55 60

ctc	gct	ttc	cac	tcc	gcg	gtg	cat	ggc	ata	gag	gac	ctg	atg	atc	cag	574	
Leu	Ala	Phe	His	Ser	Ala	Val	His	Gly	Ile	Glu	Asp	Leu	Met	Ile	Gln		
			65				70						75				
cac	aac	tgc	tca	cgc	cag	ggt	ccc	acg	gcc	tcg	ccc	ccg	gcc	cgg	ggt	622	
His	Asn	Cys	Ser	Arg	Gln	Gly	Pro	Thr	Ala	Ser	Pro	Pro	Ala	Arg	Gly		
			80				85						90				
cct	gcc	ctg	ccc	ggg	gcc	ggc	cca	gcg	ccc	ctg	acc	cca	gat	ccc	tgt	670	
Pro	Ala	Leu	Pro	Gly	Ala	Gly	Pro	Ala	Pro	Leu	Thr	Pro	Asp	Pro	Cys		
			95				100						105				
gac	tat	gaa	gcc	cgg	ttt	tcc	agg	ctg	cac	ggt	cga	acc	ccg	ggt	ttc	718	
Asp	Tyr	Glu	Ala	Arg	Phe	Ser	Arg	Leu	His	Gly	Arg	Thr	Pro	Gly	Phe		
110						115						120			125		
ttg	cat	tgt	gct	tcc	ttt	gga	gac	ccc	cat	gtg	cgc	agc	ttc	cac	aat	766	
Leu	His	Cys	Ala	Ser	Phe	Gly	Asp	Pro	His	Val	Arg	Ser	Phe	His	Asn		
			130						135						140		
cac	ttt	cac	aca	tgc	cgc	gtc	caa	gga	gct	tgg	ccc	cta	cta	gat	aac	814	
His	Phe	His	Thr	Cys	Arg	Val	Gln	Gly	Ala	Trp	Pro	Leu	Leu	Asp	Asn		
			145						150						155		
gac	ttc	ctc	ttt	gtc	caa	gcc	acc	agc	tcc	ccg	gta	gca	tcg	gga	gcc	862	
Asp	Phe	Leu	Phe	Val	Gln	Ala	Thr	Ser	Ser	Pro	Val	Ala	Ser	Gly	Ala		
			160						165						170		
aac	gct	acc	acc	atc	cgg	aag	atc	act	atc	ata	ttt	aaa	aac	atg	cag	910	
Asn	Ala	Thr	Thr	Ile	Arg	Lys	Ile	Thr	Ile	Ile	Phe	Lys	Asn	Met	Gln		
			175						180						185		
gaa	tgc	att	gac	cag	aaa	gtc	tac	cag	gct	gag	gta	gac	aat	ctt	cct	958	
Glu	Cys	Ile	Asp	Gln	Lys	Val	Tyr	Gln	Ala	Glu	Val	Asp	Asn	Leu	Pro		
190						195						200			205		
gca	gcc	ttt	gaa	gat	ggt	tct	gtc	aat	ggg	ggc	gac	cga	cct	ggg	ggc	1006	
Ala	Ala	Phe	Glu	Asp	Gly	Ser	Val	Asn	Gly	Gly	Asp	Arg	Pro	Gly	Gly		
			210						215						220		
tcg	agt	ttg	tcc	att	caa	act	gct	aac	ctt	ggg	agc	cac	gtg	gag	att	1054	
Ser	Ser	Leu	Ser	Ile	Gln	Thr	Ala	Asn	Leu	Gly	Ser	His	Val	Glu	Ile		
			225						230						235		
cga	gct	gcc	tac	att	gga	aca	act	ata	atc	gtt	cgt	cag	aca	gct	gga	1102	
Arg	Ala	Ala	Tyr	Ile	Gly	Thr	Thr	Ile	Ile	Val	Arg	Gln	Thr	Ala	Gly		
			240						245						250		
cag	ctc	tcc	ttc	tcc	atc	agg	gta	gcg	gag	gat	gtg	gca	cgg	gcc	ttc	1150	
Gln	Leu	Ser	Phe	Ser	Ile	Arg	Val	Ala	Glu	Asp	Val	Ala	Arg	Ala	Phe		
			255						260						265		
tct	gct	gag	cag	gat	cta	cag	ctg	tgt	gtt	ggg	gga	tgc	cct	ccg	agc	1198	
Ser	Ala	Glu	Gln	Asp	Leu	Gln	Leu	Cys	Val	Gly	Gly	Cys	Pro	Pro	Ser		
270						275						280			285		
cag	cga	ctc	tct	cgc	tca	gag	cgc	aat	cgc	cgt	ggg	gcg	ata	gcc	ata	1246	

Gln Arg Leu Ser Arg Ser Glu Arg Asn Arg Arg Gly Ala Ile Ala Ile	
290 295 300	
gat act gcc aga agg ttg tgt aag gaa ggg ctt ccg gtt gaa gat gcc	1294
Asp Thr Ala Arg Arg Leu Cys Lys Glu Gly Leu Pro Val Glu Asp Ala	
305 310 315	
tac ttc caa tcc tgc gtc ttt gat gtt tca gtc tcc ggt gac ccc aac	1342
Tyr Phe Gln Ser Cys Val Phe Asp Val Ser Val Ser Gly Asp Pro Asn	
320 325 330	
ttt act gtg gca gct cag tca gct ctg gac gat gcc cga gtc ttc ttg	1390
Phe Thr Val Ala Ala Gln Ser Ala Leu Asp Asp Ala Arg Val Phe Leu	
335 340 345	
acc gat ttg gag aac ttg cac ctt ttc cca gta gat gcg ggg cct ccc	1438
Thr Asp Leu Glu Asn Leu His Leu Phe Pro Val Asp Ala Gly Pro Pro	
350 355 360 365	
ctc tct cca gcc acc tgc cta gtc cgg ctt ctt tcg gtc ctc ttt gtt	1486
Leu Ser Pro Ala Thr Cys Leu Val Arg Leu Leu Ser Val Leu Phe Val	
370 375 380	
ctg tgg ttt tgc att cag taa gtaggccagc aacccgtgac tagtttggaa	1537
Leu Trp Phe Cys Ile Gln *	
385	

aagggtttgag gagagaggtt gatgtgagaa aacacaaaga tgtgccaaag gaaacagtgg	1597
ggacaggaga caacgacctt actcaatcac acgaggttgc agtccagggc tgaaatgacc	1657
ctagaataaaa gattctgaga cagggttttg cactccagac cttggtatgg gctccccatg	1717
aatttcccca ttagtgattt cccacttgta gtgaaattct actctctgta cacctgatat	1777
cactcctgca aggctagaga ttgtgagagc gctaagggcc agcaaaacat taaagggtcg	1837
agatatctta aaggcagaaa ctagaaaagg ggaaaccatg attatctata agaaaatcaa	1897
aagaggggtt tgggaattta gctcagtggg agagcacttg cctagcaagc gcaaggccct	1957
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 <212> DNA  
 <213> Rattus norvegicus

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 <223> n = A,T,C or G

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Thr Thr Pro Arg Asp Leu Thr Trp Gly Gly Gly Ser Thr Leu Cys Leu	
5 10 15	

gag gga aca tgt acc tac tct ctc ctt cca caa gag cca cat aca ctt	152
Glu Gly Thr Cys Thr Tyr Ser Leu Leu Pro Gln Glu Pro His Thr Leu	
20 25 30	

aga agt tcc agt gaa gat cta tgt gct tca gaa gag agg gga ctt gga	200
Arg Ser Ser Ser Glu Asp Leu Cys Ala Ser Glu Glu Arg Gly Leu Gly	
35 40 45	

ggt gaa agg ggg agt ggg agg ggg gct tga ggacctanct gaaagatttt	250
Gly Glu Arg Gly Ser Gly Arg Gly Ala *	
50 55	

angctgaaag aacttccttg attcaaagac atatgtcagt ngacccaaca atgagaatga	310
atatgagggc caggaaaact tgtgggaatc agtctcaaga cngaaacnga gaaagaaaga	370
aaagtggnta ggactcanat tggggaacct gggtagacag gagtggcnag ggaagaaagg	430
gatcttgggt tntccacagt ttgagacaca tccggngntc gacctattc ccngaagccn	490
cannanattgt tgcttcccn tcnntnnaat gggcctggng gtccctnctcc ctttncctng	550
gacatgaaaa ngtnntctgc nnanataacc cccntcttcc ctcccccttn antntgtccc	610
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gaaaaaaaaa aaaaaaaaaa aaaaaaccgc ccncc	705

<210> 46  
 <211> 968  
 <212> DNA  
 <213> Rattus norvegicus

<220>  
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 <223> n = A,T,C or G

<221> CDS  
 <222> (86)...(244)

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catattaact gatttagagg atact atg gat tcc aca tct tcc ctg agc ata	112
Met Asp Ser Thr Ser Ser Leu Ser Ile	
1 5	

ggg att gat ttg aaa aat gac agg gtt ggc tgt cga ccc cca tcg gag	160
Gly Ile Asp Leu Lys Asn Asp Arg Val Gly Cys Arg Pro Pro Ser Glu	
10 15 20 25	

gaa gca ggt aag gaa tca ctt agg aga act gat ctc aac att ctt cag	208
Glu Ala Gly Lys Glu Ser Leu Arg Arg Thr Asp Leu Asn Ile Leu Gln	
30 35 40	

ttc ttt cta tta ttt act tgt tta gcc tgg agt taa attcccactc	254
Phe Phe Leu Leu Phe Thr Cys Leu Ala Trp Ser *	
45 50	

cttgtgagca cttctaattt gaaaatccac tttcttcaat attttcgaaa tttaaaactg	314
atggatgacg tgacaaaact tccacgagtt aagaattctc cacctctgat ctcatgcag	374
cagggcacaa tccaaggcat gtgaattgac ttccaggttt atgtgacata taaatgaatt	434
ctgtctctag atttgatcc cattctccta aatatctcac catgcatgtg cagatattct	494

gag gga aca tgt acc tac tct ctc ctt cca caa gag cca cat aca ctt  
 Glu Gly Thr Cys Thr Tyr Ser Leu Leu Pro Gln Glu Pro His Thr Leu  
 20 25 30  
 aga agt tcc agt gaa gat cta tgt gct tca gaa gag agg gga ctt gga  
 Arg Ser Ser Ser Glu Asp Leu Cys Ala Ser Glu Glu Arg Gly Leu Gly  
 35 40 45  
 ggt gaa agg ggg agt ggg agg ggg gct tga ggacctanct gaaagatttt  
 Gly Glu Arg Gly Ser Gly Arg Gly Ala \*  
 50 55  
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 atatgagggc caggaaaact tgtgggaatc agtctcaaga cngaaacnga gaaagaaaga  
 aaagtggnta ggactcanat tggggaacct gggtagacag gagtggcnag ggaagaaagg  
 gatcttgggt tntccacagt ttgagacaca tccggngntc gacctattc ccngaagccn  
 kannanattgt tgcttcccn tcnntnnaat gggcctggng gtccctnctcc ctttncctng  
 gacatgaaaa ngtnntctgc nnanataacc cccntcttcc ctcccccttn antntgtccc  
 tacntttttg tccctttttt ttttnaaaaa annaaaataa aggggnncnn tnttccttn  
 gaaaaaaaaa aaaaaaaaaa aaaaaaccgc ccncc  
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 <223> n = A,T,C or G  
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 <222> (86)...(244)  
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 Met Asp Ser Thr Ser Ser Leu Ser Ile  
 1 5  
 ggg att gat ttg aaa aat gac agg gtt ggc tgt cga ccc cca tcg gag  
 Gly Ile Asp Leu Lys Asn Asp Arg Val Gly Cys Arg Pro Pro Ser Glu  
 10 15 20 25  
 gaa gca ggt aag gaa tca ctt agg aga act gat ctc aac att ctt cag  
 Glu Ala Gly Lys Glu Ser Leu Arg Arg Thr Asp Leu Asn Ile Leu Gln  
 30 35 40  
 ttc ttt cta tta ttt act tgt tta gcc tgg agt taa attcccactc  
 Phe Phe Leu Leu Phe Thr Cys Leu Ala Trp Ser \*  
 45 50  
 cttgtgagca cttctaattt gaaaatccac tttcttcaat attttcgaaa tttaaaactg  
 atggatgacg tgacaaaact tccacgagtt aagaattctc cacctctgat ctcatgcag  
 cagggcacaa tccaaggcat gtgaattgac ttccaggttt atgtgacata taaatgaatt  
 ctgtctctag atttgatcc cattctccta aatatctcac catgcatgtg cagatattct  
 314 374 434 494





115	120	125	
aac aaa agc caa caa ctc act gac ttc ata gaa aaa ttc aag tgt gat			674
Asn Lys Ser Gln Gln Leu Thr Asp Phe Ile Glu Lys Phe Lys Cys Asp			
130	135	140	
gga tct cct gtg aat tct gag ctc atc cag gga gct cag agc agt tgt			722
Gly Ser Pro Val Asn Ser Glu Leu Ile Gln Gly Ala Gln Ser Ser Cys			
145	150	155	
ctg aag atc gac agc ctc ctt gaa ctt ctg caa gac agg aga agg cag			770
Leu Lys Ile Asp Ser Leu Leu Glu Leu Leu Gln Asp Arg Arg Arg Gln			
160	165	170	175
ctg gac aag cac ttg cag caa cag agg cag gag ttg tct cag gtt ctg			818
Leu Asp Lys His Leu Gln Gln Gln Arg Gln Glu Leu Ser Gln Val Leu			
180	185	190	
cag tta tgt ctg tgg gac caa caa gaa agc cag gtt tct tgt tgg ttt			866
Gln Leu Cys Leu Trp Asp Gln Gln Glu Ser Gln Val Ser Cys Trp Phe			
195	200	205	
cag aaa aca ata aga gat ctg cag gaa cag agt ctg ggt tca tcc ctt			914
Gln Lys Thr Ile Arg Asp Leu Gln Glu Gln Ser Leu Gly Ser Ser Leu			
210	215	220	
tca gac aac aaa gag tta atc cgt aag cac gag gac ctg cca tca aag			962
Ser Asp Asn Lys Glu Leu Ile Arg Lys His Glu Asp Leu Pro Ser Lys			
225	230	235	
caa aga gtc cct gca gtt tag gaattgaaca gaacagtttc ctgattgaat			1013
Gln Arg Val Pro Ala Val *			
240	245		
gatcttggcg cctyyttanc ggntgcagat ggtggggcct cctctggntt ctcatectct			1073
tccactaatc tggatttttg ttcccctggt gtgccacatc actttaattt gaaagaaaaa			1133
aaataaattg ggccggaaaa aaaaaaaaaa aaaaaaaaaa rrscggccnc			1183

<210> 48

<211> 1051

<212> DNA

<213> Rattus norvegicus

<400> 48

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atgcgcgaga agaacgtgca atctcgcgag atcaggctcg ctgcgcggca gtctgctcgc	120
agcctaccct tcctaggagt tggaggaggg aaagctagat tcgattaaga gcaaaaaatt	180
gttcacgcag cagagcagct gtccaaggaa gtatccaaag gaactgcacc tcagtaaaact	240
cctggcaagt cttaggatat gacaaagggc acaggatgca ttatgagaaa ggaaggctaa	300
ggtttttcaag aacacagatt tacatcaaac ttgcgttctg aattaatctt tgagaataact	360
ggactgtgag ctagacattg agtaagaggt ttgttatatc aagaatgtga tctaaaaaaa	420
aaacattcat atcttcctcc cacaagagga tattttgaaa ctgtgggtca aagtcagact	480
acaggagagc cctcaaatat gccaaatgtg acagacagca ggattttgaa aatatagtgg	540
gagtatgtga agatgttcca gtcaaagaga cattgtttcc aaaggaaaga aagtcagtc	600
gocctcacagg aattgtgtat tccctggtag taatgcaaat ggaccacata tggctttctt	660
ctttaaagag aatacctaatt tttagctaca gagtaaaatg ctgatgatac aaaccgtgac	720
aagtggaggg acaagaaagt aaatggactg atggtgccat tgtggactgg gagggtaaaa	780



Lys Leu Val Arg Ile Trp Glu Asp Arg Val Ser Leu Thr Lys Leu Lys  
 40 45 50

gag aag gtg acc agg gaa gat gga aga atc att cta agg ata gag aaa 367  
 Glu Lys Val Thr Arg Glu Asp Gly Arg Ile Ile Leu Arg Ile Glu Lys  
 55 60 65

gag gaa tgg aag act ctc cct tct tcc tta ctg aaa ctg aat cag cta 415  
 Glu Glu Trp Lys Thr Leu Pro Ser Ser Leu Leu Lys Leu Asn Gln Leu  
 70 75 80 85

cag gag tgg caa ctt cat agg acc gga ttg ttg aaa att cct gaa ttc 463  
 Gln Glu Trp Gln Leu His Arg Thr Gly Leu Leu Lys Ile Pro Glu Phe  
 90 95 100

att gga aga ttc cag cat ctc att ggt cta gac tta tct cgg aac aca 511  
 Ile Gly Arg Phe Gln His Leu Ile Gly Leu Asp Leu Ser Arg Asn Thr  
 105 110 115

att tca gag atc ccc ccg agg cat tgg act gnt cac tta gac ttc aag 559  
 Ile Ser Glu Ile Pro Pro Arg His Trp Thr Xaa His Leu Asp Phe Lys  
 120 125 130

gaa ctg att ctt agc tac aca aaa tca a 587  
 Glu Leu Ile Leu Ser Tyr Thr Lys Ser  
 135 140

<210> 51  
 <211> 819  
 <212> DNA  
 <213> Rattus norvegicus

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 <223> n = A,T,C or G

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 ctgtcagggg cacatgttac actaagcttc atgacagtga tgtaataatg ttacacattt 120  
 gtctttagt tatgtattga agtttctgtc ctgttttggtg taaaaatgta tccactcttg 180  
 tatatattta gacttgaaac taccacacaa atattggaac ggtttgcttt atgaagttaa 240  
 aagtatcctt ccgaatggaa ctaacttgct ttgtgctcag acatatacta tgctgatgta 300  
 ttttgcaata tactatctta aattaaatct ggtcactttg ttgccttttt aaaaagtgtg 360  
 gtatttcaag tagagttatt ttctgaaat atatttgcaa actcaagctg ctttataatc 420  
 aaggaatatt tttattgatt gaagaaaatg actgctgcaa ttcaaaagtg aacttatttt 480  
 attatataga tgatttctta aaagctattt ataccatgat acaaaatcat gtagtgatcc 540  
 tgggagtgctg tagttcttcc tgtaataaac attcaacact gtatgctaga ggcagcaatg 600  
 ccaacactga agttattttg ggtgaaaacc gtcgtttotgn cctgttttagc tggggattat 660  
 taaatccata taatgtatgt gcttatgtat gctacatgtg caagttaggt gtttctcttg 720  
 tgttctgctt attaaatgtc attcagattc acttcttgaa ttctaataaa gaggggaagct 780  
 attggaaaaa ataaaaaaaa aaaaaaaaaa gcggccgcc 819

<210> 52  
 <211> 1648  
 <212> DNA

<213> Rattus norvegicus

<220>

<221> misc\_feature

<222> (1)...(1648)

<223> n = A,T,C or G

<400> 52

tctagcgaac	cccttcggtg	gcgcacgccg	gtaggatttg	ccacgcaa	gctggaatta	60
aagacatgca	gcagcagcgc	cctgtgggtt	tgggttttta	tttgattgct	tattttttatc	120
taatttttaa	tttttttgtg	atgaacgttt	tatctgcatt	tatgtctctg	taccacattc	180
gtgcctggtg	ctatggaggo	caaaaaagga	ttttaggccc	gagattgtag	ttatagatgg	240
ttgtgggctg	ccaatctgag	tgtgaaaaat	taaacctggg	tactctgaaa	gaccagccag	300
tgtctttaac	tatcaggcca	cctctccagc	actattttat	tttattttat	ttgtggagat	360
agggctctct	tctctgtatc	ctagtctaac	ttaaaacata	aagaatattc	tgtatcagta	420
tccttgagta	ctaggattct	aggcacctgt	cattatgcct	agatttttaa	cagtgtgtgt	480
taattctaca	taaaaatgaa	tttcattatt	acattttcac	acttgtgaag	aatatacttt	540
gatcatattc	ccttctcctg	atactttttc	ctatccttcc	tccccactcc	attagttccc	600
ttcttctttt	cagagtctac	cttctacttt	ttactttgat	ttttttcccc	ccacattctg	660
tgggtgagag	aatgcataatt	acagttgtat	ttctgaatct	ggctaggtac	attcacttaa	720
cataattaat	gatcctgggc	gagcgaagg	gttcncctan	cnaaccctt	cggttcaata	780
ccatttcaga	gatgggcatt	tccctcaatg	aaatacacaa	gtaaacattc	cgacattgtc	840
tttaggagtg	tttggttaaaa	aaaaaaaaaa	aaaaaacan	ancccaaaa	caaaaaaaaa	900
aaagctttgc	accttgcaaa	agtggctcctg	gcgtgggtag	attgctgtta	atcctttatc	960
aataacgttc	tatagagaat	atataaatat	atatataatt	atatctccta	gtccctgcct	1020
cttaagagcc	gaaaatgcat	gggtgttgta	gacattcggg	tgcactaaat	tcctctctga	1080
attttggtctg	ctgaagccgt	tcatttagca	actggtttata	ggtggttgat	gaatggttcc	1140
ttatctocat	ttcttcctat	gtagcttaag	ccgcttcctt	cacagaatct	aataatctcg	1200
tctaggocat	tagccctgcc	ctttcttaac	attcttgtat	ttgttgaatt	tggcctcctc	1260
gaaagcaata	gcaactgggt	ggcccaccca	agttttaacg	cccctgattc	catctatggc	1320
atttgtacca	aatataagtt	ggatgcattt	attttagaca	caaagcttta	ttttttogac	1380
atcgtgtttc	aagaaaaaaa	acaaatagaa	taacaataac	tatgactttg	aggccaatca	1440
tttttaggtg	tgtgtttgaa	gcatagaacg	tctnttaaac	totcaatggg	tccttcaaat	1500
gatgagttag	tatgtaacgt	aaatagcagt	ttctctctct	ctctctctct	ttttattttt	1560
tocanataga	gcactatgta	aatttagcat	atcaataata	caggaaactat	ccnccaaaaa	1620
aaaaaaaaaa	aaaaaaaaaa	gcggccgc				1648

<210> 53

<211> 782

<212> DNA

<213> Rattus norvegicus

<220>

<221> misc\_feature

<222> (1)...(782)

<223> n = A,T,C or G

<221> CDS

<222> (277)...(426)

<400> 53

tctagcgaac	cccttcgtag	aactaggagc	cagtgttgac	caaggctcgg	ggttgatac	60
cccactgcat	gctgcagcaa	ggcagtcag	tgtggaggtc	atcaatctgc	tactgagta	120
tggggctaac	ctgaaactca	gaaactcgca	gggcaaaagt	gctcttgagc	tcgtgctcc	180
caaaagtagt	gtggagcagg	cactcctgct	ccatgaaggt	ccacctgctc	tttctcagct	240
ctgccgcttg	tgtgtccgga	agtgcctggg	ccgcac atg	tca tca agc	cat cta	294
			Met	Ser Ser Ser	His Leu	

5

ggt gga aac atg ttg cct gct gta gga cac tta ata tac aca ttc agt 390  
Val Gly Asn Met Leu Pro Ala Val Gly His Leu Ile Tyr Thr Phe Ser  
25 30 35

ggc tta acc cac tat cct aaa aat ctg ctt acc taa ttagaataaaa 436  
Gly Leu Thr His Tyr Pro Lys Asn Leu Leu Thr \*  
40 45

gccttcataa	atccaaatac	ttgcggtgaa	caaactcctg	gttagggttaa	tggntgccaa	496
gagataacca	gaaacctttc	aagtttttaa	ctcttggtaa	tttaaaatca	aactgaaata	556
gatggaaaat	aataatctat	ttttggataa	ttcaaggacc	cttcagtatc	tggggctggg	616
gtccgcattt	tnatactgg	atagacacac	acacaggtag	gatanggtaa	atnaactact	676
taaaagaatg	cctgggattt	aagtctcca	gatatttttt	aggtngnggt	ttcctaaaat	736
aaaattctgg	agtgccaaaa	aaaaaaaaaa	aaaaaaaaaa	cgggcc		782

```
<210> 54
<211> 538
<212> DNA
<213> Rattus norvegicus
```

```
<220>  
<221> misc_feature  
<222> (1)...(538)  
<223> n = A,T,C or G
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<221> CDS  
<222> (252) ... (464)

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<400> 54
gtctagcgaa ccccttcggg aaacttcaac aaaggtacca gcaactacag cgccttgtcc      60
accagattt cttcagccaa aagtctcaga ctgagaaacg gttctcggag aagcattcga      120
ccctggtgaa tgatgcctac aagactcttc agggccccgt gagcagagga ctatatcttc      180
taaagctcca aggaatagaa attcctgaag ggacagatta tagaacagac agtcagttcc      240
ttgtggaaat c atg gaa atc aat gaa aaa ctc gca gac gcc aaa agt gag      290
          Met Glu Ile Asn Glu Lys Leu Ala Asp Ala Lys Ser Glu
                1                5                10

```

gca gcc atg gaa gag gta gaa gcc act gtc aga gct aaa cag aaa gaa 338  
Ala Ala Met Glu Glu Val Glu Ala Thr Val Arg Ala Lys Gln Lys Glu  
15 20 25

ttt acg gac aat ata aac aga gct ttt gaa caa ggt gat ttt gaa aaa 386  
Phe Thr Asp Asn Ile Asn Arg Ala Phe Glu Gln Gly Asp Phe Glu Lys  
30 35 40 45

gcc aag gaa ctt ctt aca aaa atg aga tac ttt tca aac ata gaa gaa 434  
Ala Lys Glu Leu Leu Thr Lys Met Arg Tyr Phe Ser Asn Ile Glu Glu  
50 55 60

aag atc aag tta agc aag aac cct ctc tag ttgctaactt aaaggtttta 484  
Lys Ile Lys Leu Ser Lys Asn Pro Leu \*

aaataaaactt tgtattttctt cannnnnnnan nnnnnannntn nnnnagcggc cgcc

538

<210> 55

<211> 805

<212> DNA

<213> Rattus norvegicus

<400> 55

tctagcgaac	cccttcgcga	aggggttcgc	ttcttacct	gtggagaaag	gggcaggagg	60
aacctcctgt	gttaggagga	agctggagct	taccactgtg	agaggacaga	tgtggactga	120
gaattttctt	agtgtcagt	ggcacttccc	aaggactccc	ctccccttgt	gctctgtgcg	180
gttttttagga	cagctaagat	gactgccacc	tgttgtggca	ggcccgat	gtcttgttct	240
ccccttactg	taccccgata	taatctctgt	tgatcaacag	gactacccca	agaatccaca	300
tgttctcccc	cgtaaccagg	cagctgtctg	gttcatgcct	tcttcccttc	aaacccaacc	360
cagcgccttt	gttagtgaag	aggtggtcca	tggactgatg	acaagttatt	agcactggat	420
gctgtttcca	tagtgacaag	cctatacctc	ttcccaccct	ttagtgcgca	gtgggctgct	480
gcttcagtat	cctcccagct	cagttttatt	agatcaaagc	tgcccttggg	caccatgttg	540
gccacctcaa	tcaccagcca	aaatggtcgc	tttgtccacc	agaggtcaag	ccatctttct	600
ggcgctgtag	ttcccagctc	cttctaggga	acaggaagtt	gatattgcca	tgggggaggt	660
ggcggggtgt	ggcgcgcacc	tcaatagttt	tactgtaaaa	gggaaatttg	aacaagaaca	720
acaacaaaaa	aaaaaaaaaa	acaaagaaaa	aaataaaaaa	ctttaaaaagt	tgaaaaaaaaa	780
aaaaaaaaaa	aaaaaaagcg	gccgc				805

<210> 56

<211> 1407

<212> DNA

<213> Rattus norvegicus

<220>

<221> misc\_feature

<222> (1)...(1407)

<223> n = A,T,C or G

<221> CDS

<222> (90)...(431)

<400> 56

tctagcgaac	cccttcgctg	ggacccgcaa	ctaccaactg	ccgcctggat	cctaggtgag	60
ctgtgggctc	tgacagcgct	gtggctaac	atg gca ccc	aaa aag aag act ctc		113
			Met Ala Pro	Lys Lys Lys Thr Leu		
			1	5		
aag aag aac	aaa ccc gag	atc aat gag	atg acc atc	atc atc gtg	gaa gac	161
Lys Lys Asn	Lys Pro Glu	Ile Asn Glu	Met Thr Ile	Ile Val Glu	Asp	
10	15	20				
agc ccc cta	aac aag ctg	aat gct cta	aat ggg ctc	ctg ggg gga	gaa	209
Ser Pro Leu	Asn Lys Leu	Asn Ala Leu	Asn Gly Leu	Leu Gly Gly	Glu	
25	30	35	40			
aac agc ctt	agc tgt gtt	tct ttc gaa	cta aca gac	act tct tat	ggc	257
Asn Ser Leu	Ser Cys Val	Ser Phe Glu	Leu Thr Asp	Thr Ser Tyr	Gly	
45	50	55				
ccc aac ctc	ctg gaa ggt	tta agt aaa	atg cgt caa	gag agc ttt	cta	305

Pro Asn Leu Leu Glu Gly Leu Ser Lys Met Arg Gln Glu Ser Phe Leu  
60 65 70

tgt gac ttg gtc atc ggt cca aaa cca agt cct ttg atg tcc ata agt 353  
Cys Asp Leu Val Ile Gly Pro Lys Pro Ser Pro Leu Met Ser Ile Ser  
75 80 85

caa gtg atg gct tcc tgc agc gag tct tct ata ata tcc tta aaa cga 401  
Gln Val Met Ala Ser Cys Ser Glu Ser Ser Ile Ile Ser Leu Lys Arg  
90 95 100

tcc atc gac aaa aag ggt aga cct caa tga tctcgnccct ttagggctac 451  
Ser Ile Asp Lys Lys Gly Arg Pro Gln \*  
105 110

caccgtgata gcatatgcat acacnggaaa gctgcccctt ctttatacac aataaggaag 511  
catcatttct gctgctgtgt acctccagat ccacactctt gtgaagatgt gcagcgactt 571  
tctgatccga gagatcagtg ttgagaactg catgtatggt gttaacatgg ctgaaacata 631  
ctgcttgaaa aatgcgaaag caacggccca gaaatttatc cgggataact tcattgaatt 691  
tgccgactcc gaacaattta tgaagctgac gtttgaacag attaatagagc ttctcataga 751  
tgatgacttg cagttgcctt ctgagctggt agcattccag attgcaatga aatggataga 811  
attcaaccaa aagagagtga agcacgctgc ggatctttta agcaatattc gctttggtac 871  
catctctgca caagacctgg tcaattacgt tcaaaccgta ccgagaatga tgcaagacgc 931  
tgattgtcat aaactgcttg tggatgctat gaactaccac ttactacctt atcatcaaaa 991  
cacgttgcaa tctaggcgga caagaattag aggcggctgc cgggttctga tcaactgtcg 1051  
gggacgcctt ggctgactg agaagtcctt tagtagagac gtttatatag agaccctgaa 1111  
aatggatgga gcaagcttac agaaatgcca gccaaagatt tcaatcagtg tgtggctgtg 1171  
atggatggat tccttttatgt agcaggtggt gaggaccaga atgatgcgag aaaccaagcc 1231  
aagcatgcag tcagcaattt ctgcaggtac cgatccccgc ttcaacacgt ggatccacct 1291  
gggcagcatg aaccagaagc gcacgcactt cagcctgagc gtgttcaacg ggctcctgta 1351  
cgccggtggn gggcnccagt gnganggata tctgcagaat tcggctagcc gaattc 1407

<210> 57  
<211> 2004  
<212> DNA  
<213> Rattus norvegicus

<220>  
<221> misc\_feature  
<222> (1)...(2004)  
<223> n = A,T,C or G

<221> CDS  
<222> (88)...(432)

<400> 57  
tctagcgaac cccttcggac actgccagca tagacagcag cccttgctac tgtcccacca 60  
ctgtacccca gagccccgac tagcagt atg ccg gga gcg cca ggg cct ggg cct 114  
Met Pro Gly Ala Pro Gly Pro Gly Pro  
1 5

gag gtg gct gca gcc ttt gag gaa cgg ttg agt cag gca cta cag gaa 162  
Glu Val Ala Ala Ala Phe Glu Glu Arg Leu Ser Gln Ala Leu Gln Glu  
10 15 20 25

ctg cag gca gtg gct gaa gca ggc cgg tca gcg gtg acc cag gca gct 210  
Leu Gln Ala Val Ala Glu Ala Gly Arg Ser Ala Val Thr Gln Ala Ala

	30	35	40	
gat gca gcc cta gcc act gta gag cca gtg gct cag gca tct gaa gag				258
Asp Ala Ala Leu Ala Thr Val Glu Pro Val Ala Gln Ala Ser Glu Glu				
	45	50	55	
ctt cgg gcc gag aca gca gcc ctg agc cgg cgg ctg gat gcc ctg acc				306
Leu Arg Ala Glu Thr Ala Ala Leu Ser Arg Arg Leu Asp Ala Leu Thr				
	60	65	70	
agg cag gtg gag gtg ctg agc cta cgg ctg ggt gtt cca ctc gtg ccg				354
Arg Gln Val Glu Val Leu Ser Leu Arg Leu Gly Val Pro Leu Val Pro				
	75	80	85	
gac ctg gag tcc gag cta gag ccc agc gag ctg ttg ctg gct gct gcc				402
Asp Leu Glu Ser Glu Leu Glu Pro Ser Glu Leu Leu Leu Ala Ala Ala				
	90	95	100	105
gac cct gag gcc ctc ttc cag gca agc tga ggatgctggg acccccgtgg				452
Asp Pro Glu Ala Leu Phe Gln Ala Ser *				
	110			

ccacccgcct	gccttttagca	cccgccgcag	ctctttctgcg	ggccccctctc	gaagcagcag	512
tctcatggag	cccgatccag	cagagccccc	ctctgccaca	gtggaagcag	ctaattggaac	572
agagcagact	ctggacaaag	tgaacaaagg	cccagagggg	cggagccccc	tgagtgcaga	632
ggagctgatg	gccattgagg	acgaaggaat	cctggacaag	atgctggacc	aggctacgaa	692
ctttgaagag	cggaagctca	tccgggctgc	gctccgtgag	ctccgacaaa	gaaagagaga	752
ccagagggac	aaggaacgag	aacggcggct	acgagaggca	cgggcccggc	caggcgagag	812
ccgaagcaat	atggctacta	cagagaccac	caccaggcac	aagccagagg	gcggtgatg	872
gctcggcggt	cagcacagtt	accaaaactg	agcgggtcgt	ccactccaat	gacggcacgc	932
agactgcgcg	caccaccaca	gtggagtcca	gtttcgtgag	gcgctcggag	aatggcagca	992
gcaagcaagc	agcagcacca	cggtcctaac	caagaccttt	tcctcttcct	cttcctcatc	1052
caaaaaaatg	ggcagtatct	tgcaccgaga	ggaccaaac	agctcacgtt	ctggcagcct	1112
ggcgccctc	gaaaaacgcc	aggcagagaa	gaagaaagag	ctcatgaagg	cacagagtct	1172
gcccagacc	taagcgtccc	aagcacgcaa	ggccatgatt	gagaaaactag	agaaggaagg	1232
ctcttogggc	agtcctggca	caccccgtac	agcggtagag	cgttctacca	gcttcggagt	1292
ccccaacgcc	aacagcatca	agcagatgtt	gctggactgg	tgccgagcca	agaccogtgg	1352
ctacgagcac	gtggacatcc	agaacttctc	tccagctgga	gtgatgggat	ggctttctgt	1412
gccttggtgc	acaattttctt	ccctgaggct	tttgactatg	gacagcttag	cccacaaaac	1472
cggcgccaga	actttgaaat	ggcctttctca	tctgctgaga	cccattgcgga	ctgcccgcag	1532
ctcctggata	cagaggacat	ggtgcggctt	cgagagcctg	actggaagtg	cgtgtacacg	1592
tacatccagg	agttctaccg	ctgtctggtc	cagaaggggc	tggtaaaaaac	caaaaagtcc	1652
taacccctgc	ttggggcccc	acggatgctg	gtggactgtg	tacccttggt	ggaggtggag	1712
gacatgatga	tcatgggcaa	aaagccagac	cctaagtgcg	tcttcacctc	cgtgcaatcg	1772
ctgtacaacc	acctgcggcg	ccatgagctg	cgctgcgcg	gcaagaatgt	ctagccactg	1832
ctcacaccgc	ctgcgctgca	ggctgctgtc	ccacgcccc	aacaccggnc	cctncagtgn	1892
gcctgccact	gntgcccgtn	tgtcgaaaca	cctntcccct	tgtcacacgc	agnngnttga	1952
taaattatatt	gntttnaaca	aaaaaaaaaa	aaaaaaaaaa	aaaagcggcc	gc	2004

<210> 58  
 <211> 881  
 <212> DNA  
 <213> Rattus norvegicus

<220>  
 <221> CDS  
 <222> (84)...(377)



<400> 58

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acaagcctga cgtcaagacc cca atg gct aac gaa gct aac cct tgc cca tgt 113  
Met Ala Asn Glu Ala Asn Pro Cys Pro Cys  
1 5 10

gac att ggt cac agg cta gac tat ggt ggc atg ggc cag gaa gtt cag 161  
Asp Ile Gly His Arg Leu Asp Tyr Gly Gly Met Gly Gln Glu Val Gln  
15 20 25

gtt gag cac atc aag gca tat gtc acc cgg tcc cct gtg gat gca ggc 209  
Val Glu His Ile Lys Ala Tyr Val Thr Arg Ser Pro Val Asp Ala Gly  
30 35 40

aaa gct gtg att gtt gtc cag gat ata ttt ggc tgg cag ctg tcc aac 257  
Lys Ala Val Ile Val Val Gln Asp Ile Phe Gly Trp Gln Leu Ser Asn  
45 50 55

acc agg tat atg gct gac atg att gct gga aat gga tac aca act att 305  
Thr Arg Tyr Met Ala Asp Met Ile Ala Gly Asn Gly Tyr Thr Thr Ile  
60 65 70

gcc cag act tct ttg tgg gtc aag agc cat ggg acc cgg ctg gtg att 353  
Ala Gln Thr Ser Leu Trp Val Lys Ser His Gly Thr Arg Leu Val Ile  
75 80 85 90

ggg cca cct tcc ctg agt ggt tga aatcaagaaa tgccagaaaa atcaaccgag 407  
Gly Pro Pro Ser Leu Ser Gly \*  
95

agggtgatgc tgtcttgagg tatctgaaac aacagtgtca tgcccagaag attggcattg 467  
tgggcttctg ctgggggggt attgtggtgc accacgtgat gacgacatat ccagaagtca 527  
gagcgggggt gtctgtctat ggtatcatca gagattctga agatgtttat aatttgaaga 587  
acccaacgtt gtttatcttt gcagaaaatg atgctgtgat tccacttgag caggtttcta 647  
tactgatcca gaagcttaaa gaacactgca tagttaatta ccaagttaag acattttctg 707  
ggcaaactca tggctttgtg catcggaaga gagaagactg ctcccctgca gacaaaccct 767  
acattgagga agcaggaggg aatctcatcg aatggctgaa caagtatatt taacagcact 827  
caagcacaata ttttgaataa ttaaattgac ccgaataatt aaattgaccc gaat 881

<210> 59

<211> 97

<212> PRT

<213> Rattus norvegicus

<400> 59

Met Ala Asn Glu Ala Asn Pro Cys Pro Cys Asp Ile Gly His Arg Leu  
1 5 10 15  
Asp Tyr Gly Gly Met Gly Gln Glu Val Gln Val Glu His Ile Lys Ala  
20 25 30  
Tyr Val Thr Arg Ser Pro Val Asp Ala Gly Lys Ala Val Ile Val Val  
35 40 45  
Gln Asp Ile Phe Gly Trp Gln Leu Ser Asn Thr Arg Tyr Met Ala Asp  
50 55 60  
Met Ile Ala Gly Asn Gly Tyr Thr Thr Ile Ala Gln Thr Ser Leu Trp  
65 70 75 80  
Val Lys Ser His Gly Thr Arg Leu Val Ile Gly Pro Pro Ser Leu Ser

Gly

&lt;210&gt; 60

&lt;211&gt; 245

&lt;212&gt; PRT

&lt;213&gt; Rattus norvegicus

&lt;400&gt; 60

Met	Lys	Pro	Glu	Asn	Cys	Phe	Thr	Ile	Thr	Ser	Ser	Phe	Trp	Pro	Ser
1				5					10					15	
Leu	Arg	Pro	Trp	Lys	Ile	Val	Cys	Gly	Asp	Ser	Tyr	Arg	Lys	Gln	Thr
			20					25					30		
Gly	Arg	Leu	Lys	Gln	Thr	Arg	Ser	Lys	Val	Arg	Cys	Arg	Cys	His	Gly
		35					40				45				
Gln	Thr	Leu	Gly	Glu	Ala	Trp	Ala	Thr	Leu	Val	Phe	Met	Leu	Glu	Arg
	50				55						60				
Arg	Arg	Glu	Leu	Leu	Gly	Leu	Thr	Ser	Glu	Phe	Phe	Gln	Ser	Ala	Leu
65					70					75					80
Glu	Phe	Ala	Ile	Lys	Ile	Asp	Gln	Ala	Glu	Asp	Phe	Leu	Gln	Asn	Pro
				85					90					95	
His	Glu	Phe	Glu	Ser	Ala	Glu	Ala	Leu	Gln	Ser	Leu	Leu	Leu	Leu	His
			100					105					110		
Asp	Arg	His	Ala	Lys	Glu	Leu	Leu	Glu	Arg	Ser	Leu	Val	Leu	Leu	Asn
		115					120					125			
Lys	Ser	Gln	Gln	Leu	Thr	Asp	Phe	Ile	Glu	Lys	Phe	Lys	Cys	Asp	Gly
		130				135					140				
Ser	Pro	Val	Asn	Ser	Glu	Leu	Ile	Gln	Gly	Ala	Gln	Ser	Ser	Cys	Leu
145					150					155					160
Lys	Ile	Asp	Ser	Leu	Leu	Glu	Leu	Leu	Gln	Asp	Arg	Arg	Arg	Gln	Leu
				165					170					175	
Asp	Lys	His	Leu	Gln	Gln	Gln	Arg	Gln	Glu	Leu	Ser	Gln	Val	Leu	Gln
			180					185						190	
Leu	Cys	Leu	Trp	Asp	Gln	Gln	Glu	Ser	Gln	Val	Ser	Cys	Trp	Phe	Gln
		195					200					205			
Lys	Thr	Ile	Arg	Asp	Leu	Gln	Glu	Gln	Ser	Leu	Gly	Ser	Ser	Leu	Ser
	210					215					220				
Asp	Asn	Lys	Glu	Leu	Ile	Arg	Lys	His	Glu	Asp	Leu	Pro	Ser	Lys	Gln
225					230					235					240
Arg	Val	Pro	Ala	Val											
					245										

&lt;210&gt; 65

&lt;211&gt; 142

&lt;212&gt; PRT

&lt;213&gt; Rattus norvegicus

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (1)...(142)

&lt;223&gt; Xaa = Any Amino Acid

&lt;400&gt; 65

Met	Thr	Glu	Ser	Val	Val	Cys	Thr	Gly	Ala	Val	Ser	Thr	Val	Lys	Glu
1				5						10				15	
Val	Trp	Glu	Glu	Arg	Ile	Lys	Lys	His	His	Glu	Asp	Val	Lys	Arg	Glu

	20		25		30										
Lys	Glu	Phe	Gln	Gln	Lys	Leu	Val	Arg	Ile	Trp	Glu	Asp	Arg	Val	Ser
	35					40					45				
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	50					55					60				
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	65				70					75				80	
Lys	Leu	Asn	Gln	Leu	Gln	Glu	Trp	Gln	Leu	His	Arg	Thr	Gly	Leu	Leu
			85						90				95		
Lys	Ile	Pro	Glu	Phe	Ile	Gly	Arg	Phe	Gln	His	Leu	Ile	Gly	Leu	Asp
			100					105					110		
Leu	Ser	Arg	Asn	Thr	Ile	Ser	Glu	Ile	Pro	Pro	Arg	His	Trp	Thr	Xaa
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Leu	Asn	Gly	Leu	Leu	Gly
	35		40		45
Glu	Leu	Thr	Asp	Thr	Ser
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Lys	Met	Arg	Gln	Glu	Ser
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Gln

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Glu	Arg	Leu	Ser	Gln	Ala	Leu	Gln	Glu	Leu	Gln	Ala	Val	Ala	Glu	Ala
		20					25					30			
Gly	Arg	Ser	Ala	Val	Thr	Gln	Ala	Ala	Asp	Ala	Ala	Leu	Ala	Thr	Val
		35				40					45				
Glu	Pro	Val	Ala	Gln	Ala	Ser	Glu	Glu	Leu	Arg	Ala	Glu	Thr	Ala	Ala
	50					55				60					
Leu	Ser	Arg	Arg	Leu	Asp	Ala	Leu	Thr	Arg	Gln	Val	Glu	Val	Leu	Ser
	65			70					75					80	
Leu	Arg	Leu	Gly	Val	Pro	Leu	Val	Pro	Asp	Leu	Glu	Ser	Glu	Leu	Glu
			85				90						95		
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